BLM LIBRARY
88025937

BURNS-OCHOCO

ENVIRONMENTAL ANALYSIS RECORD

FOR PROPOSED NON-COMPETITIVE

OIL AND GAS LEASING

BURNS DISTRICT
BUREAU OF LAND MANAGEMENT
US DEPARTMENT OF THE INTERIOR

SNOW MOUNTAIN DISTRICT
OCHOCO NATIONAL FOREST
US DEPARTMENT OF AGRICULTURE

TD
195
P4
87
976

OREGON

PROPERTY OF
Bureau of Land Management
DSC LIBRARY

88025937

PROPERTY OF
Bureau of Land Management
DSC LIBRARY

BURN
.76
EAR

TD
195
.P4
B87
1976

BLM Library
D-553A, Building 50
Denver Federal Center
P. O. Box 25047
Denver, CO 80225-0047

PROPOSED OIL & GAS LEASING

ENVIRONMENTAL ANALYSIS RECORD

BURNS-OCHOCO NON-COMPETITIVE OIL & GAS AREA

Snow Mountain District	Burns District
Ochoco National Forest	Bureau of Land Management
U. S. Dept. of Agriculture	U. S. Dept. of Interior

PROPERTY OF
Bureau of Land Management
DSC LIBRARY

JUL 1976

TABLE OF CONTENTS

Page

I. Proposed Action 1
Introduction 1
Operational Procedures 1
Administrative Procedures 12
Alternatives to the proposed Action 17

II. Existing Environment

A. Physiography 18
B. Geology 18
C. Soils 22
D. Land Use 24
E. Air 30
F. Temperature 30
G. Non-Ionizing Radiation 30
H. Water 30
I. Vegetation 32
J. Wildlife 34
K. Ecological Interrelationships 37
Food and Community Relationships
L. Human Values 39
Socio-Cultural Interests 39
Archeology 39
Social Welfare 40
Attitudes and Expectations 41

III. Analysis of the Proposed Action 44
A. Anticipated Environmental Impacts 44
B. Possible Mitigating Measures 51
C. Recommended Mitigating Measures 53
D. Residual Impacts 55

IV. Relationship Between Short-Term Use and Long-Term Productivity 57

V. Irreversible and Irretrievable Commitments of Resources 59

VI. Persons, Groups and Government Agencies Consulted 59

VII. Intensity of Public Interest 59

VIII. Participating Staff 59

IX. Summary Conclusion 60

ILLUSTRATIONS Page

1. Location Map of the Oil and Gas Leasing Area 2
2. Lease Status Map 3
3. Sequence of an Oil and Gas Operation 4
4. Oil and Gas Field Facility 9
5. Sequence of Administrative Procedures 14
6. Geologic Map 20
7. Geologic Stratigraphic Column 21
8. Soils Map 28
9. Wildlife Inventory Map 35

TABLES

1. Land Ownership 26
2. Livestock Grazing Use 27
3. Average Monthly Temperature 31
4. Average Monthly Precipitation 31
5. Vegetation Species 33

APPENDIX

A. Statewide Overview of Possible Oil and Gas Development on Federal Lands
B. Wildlife Inventory List
C. Archeological Report
D. Federal Oil and Gas Regulations
E. Environmental Protection Agency Regulations
F. Oil and Gas Lease Environmental Protection Clause
G. Additional Stipulations for Forest Service Lands
H. Form for Additional Stipulations After Lease Issuance
I. Oregon Department of Geology and Mineral Industry Regualtions
J. State Drilling Permit Conditions
K. Public Interest Section

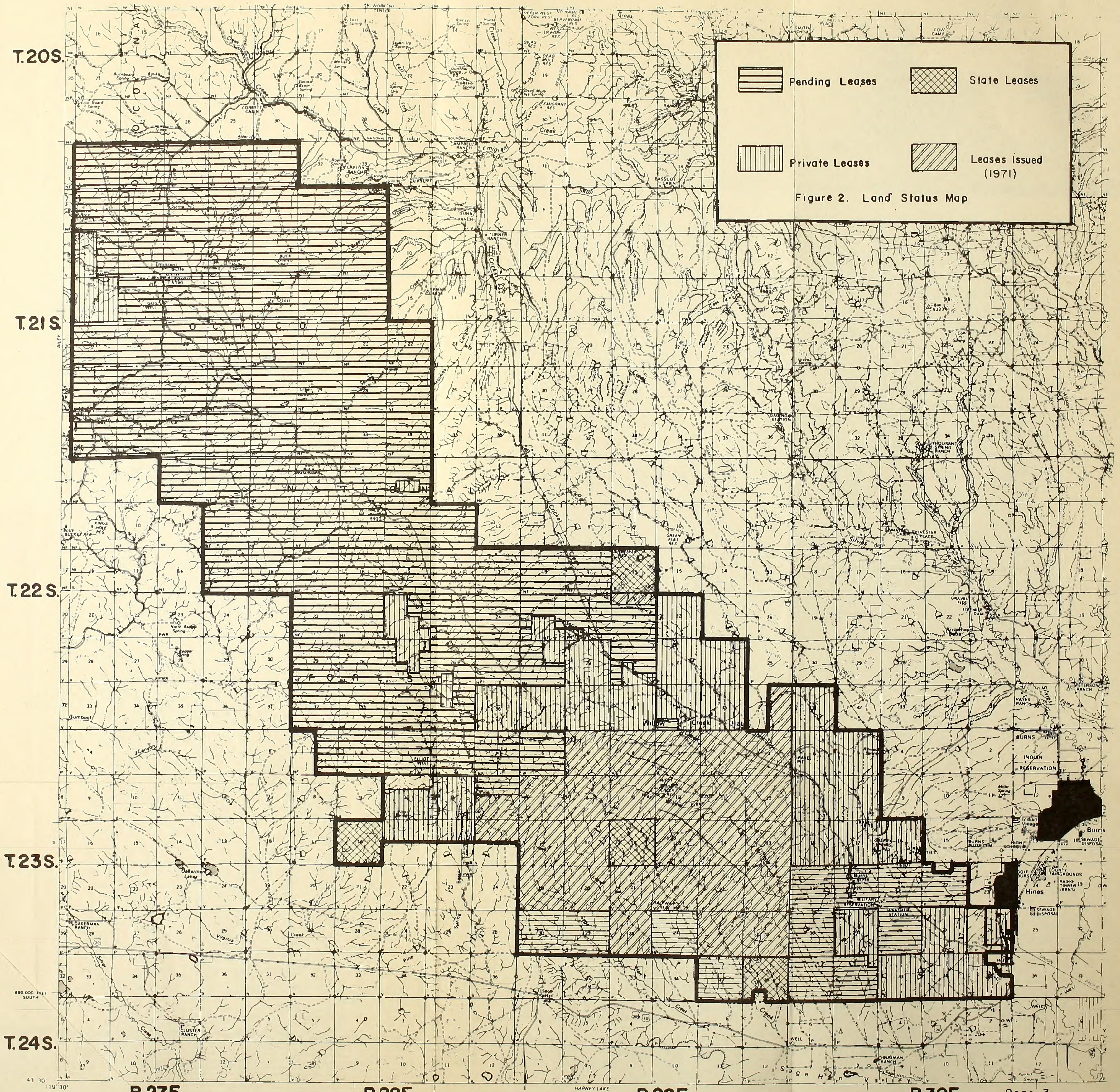
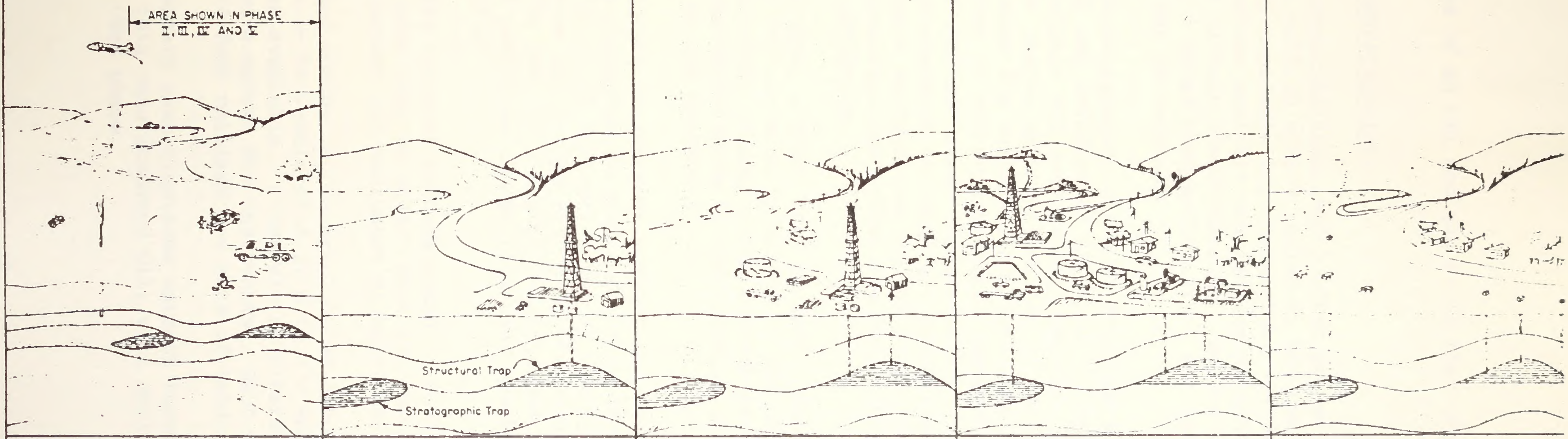


Figure 2. Land Status Map

PHASE I	PHASE II	PHASE III	PHASE IV	PHASE V
PRELIMINARY INVESTIGATON (Unknown Geologic Structure) Preliminary investigations are carried out over large areas from aircraft and on the ground.	EXPLORATON If the preliminary investigations indicate that geologic structures may contain oil and gas, a lease is obtained and an exploratory well is drilled.	DEVELOPMENT If oil and gas are discovered during the exploration phase and recovery is economically feasible, the field is developed for production.	PRODUCTION The production phase involves operation and maintenance of the field and recovery of oil and gas.	ABANDONMENT When the field is abandoned, equipment is removed, wells are plugged, and the surface is reclaimed.



Airborne surveys Surface surveys Geochemical surveys Stratigraphic & Other Mapping Geophysical surveys Explosive method Thumper method Vibrator method Gravity & other methods Geologic surveys	Wildcat well drilling Access roads Camp and buildings (remote areas)	Development drilling Access roads Pipelines Utility lines Separators Storage tanks Camp and buildings	Continued drilling and development of field Pressure maintenance system Disposal of waste Secondary and tertiary recovery system Communication and production systems Communities	Equipment, buildings and facilities removal Field cleanup Well abandonment and plugging Eliminate Hazard Surface reclamation Landscaping Reseeding Other erosion control

I-2

SEQUENCE OF OPERATIONS
OIL AND GAS FIELD

Figure 3. Sequence of operation in an oil and gas field.

the operations of an oil and gas field that can be expected in the lease area.

Preliminary Investigations

Preliminary investigations, which often precedes the issuance of a lease, begins with an office review by the company of geological and technical data available for the region. In many oil and gas producing regions, an office analysis may develop enough information to proceed with drilling without investigations. However, the office analysis may indicate only a broad prospective area, and further preliminary investigations may be required.

Preliminary investigations are made from the air and on the ground. Small aircraft and helicopters are used to conduct visual reconnaissance, photographic and geophysical surveys. On the ground surveys may involve either casual or intensive use of the land. Casual uses generally do not disturb the surface; intensive uses include operations that require clearing of new access trails, movement of heavy equipment, or other actions that can result in substantial surface disturbance. Geological, geochemical and soil-gas surveys normally do not disturb the surface. Seismic surveys, one of the most frequently used methods of geophysical investigation, often requires clearing new access trails and moving heavy equipment.

In seismic surveys, a shock wave is sent into the subsurface and the time required for the wave to travel to and return from a subsurface horizon is recorded. A map of the subsurface can be drawn from an analysis of the differences in the times it takes the wave to be reflected back to the surface.

Explosive, thumper or vibrator methods are used to produce the shock wave. In the explosive method, shot holes are drilled to a depth of 50 to 200 feet (15 to 60 meters). Four to twelve holes are drilled per mile. The holes are loaded with 5 to 50 pounds of explosives and detonated. The same hole may be reloaded and shot several times to find the depth and explosive charge returning the best reflection or refraction signal.

The thumper and vibrator methods pound or vibrate the earth to create a shock wave. Less than 50 square feet (465 dm^2) of surface area is required to operate the equipment at each test site.

The sensors and energy source are located along straight seismic lines laid out on a 1- to 2-mile grid (1.6 to 3.2 km). Existing road systems are used where available. Lines may be cleared of vegetation and loose rocks to improve access for the trucks. Each mile of line cleared to a width of 8-1/4 feet utilizes one acre of land.

If the preliminary investigations warrant further exploration, the operator (in this case Standard Oil) will apply for a lease and prepare for the next phase.

Exploratory Drilling

If preliminary investigations warrant further explorations, the operator may drill shallow stratigraphic test holes to locate geological indicators of oil and gas. The holes are usually drilled with truck-mounted equipment and disturb a relatively small area, although heavier drilling equipment may be used for deeper holes. Stratigraphic holes in areas of high pressure zones are cased. The roads and trails needed for access to the test sites are temporary and involve minimal construction. The drill site occupies approximately 900 square feet (8.36 dm^2) and is sometimes placed in the center of a new or existing trail. The presence of suspected oil and gas deposits may be confirmed by wildcat drilling of deep holes. Wildcat wells are deeper tests, require larger drilling rigs and support facilities and may disturb a larger surface area, generally one to three acres, than stratigraphic tests. Required facilities include roads, drill pads, mud pits and in some isolated areas, camps and airports. Twenty to twentyfive men are needed for this type of operation.

Nationwide, approximately one out of every 7 wildcat wells in 1974 was completed as a producer. However, only one in 59 resulted in discovering significant amounts of oil and gas. Of the 200 or so wells drilled in Oregon, none has been financially successful.

After a drilling site has been selected, a heavy duty road may be built to move the drilling rig and other equipment to the location. The roads are not designed for permanent access.

The well site occupies about an acre and is cleared of all vegetation and graded nearly flat. Depending on the soils in the area, the well site, drill pad and roads may or may not be gravelled. The drilling rig, mud pumps, mud pit, generators, pipe rack and tool house are located on the drill pad. Other facilities such as storage tanks for water and fuel may be located on or nearby the drill pad. Mud pits are lined with impermeable material to prevent contamination of soils or water.

A water supply is needed for mixing drilling mud, cleaning equipment, cooling engines and other uses. A pipeline may be laid several miles to a stream or water well to provide the 800 gallons (3,028 liters) which are needed daily.

The drilling mud is maintained at a specific weight and viscosity to cool the bit, reduce the drag of the drill pipe on the sides of the well bore, bring the drill cuttings to the surface for disposal, seal off any porous formation so as to prevent loss of drilling fluid, and protect formation fluids from contamination. Additives help keep the drill mud at the appropriate viscosity and weight. Some of the more rarely used additives are caustic, toxic or acidic in nature. Weight additives and fluid loss additives are commonly used and harmless.

Development

A well spacing pattern must be established before development drilling begins. The pattern is determined by the U. S. Geological Survey and the Oregon Department of Geology and Mineral Industries. Most spacing patterms established for current Federal leases set minimums of 10 to 160 acres (4 to 64 hectares) per well for oil production and units of 160, 320, or 640 acres (64, 128, 256 hectares) per well for gas production. Administrative rules of the Oregon Department of Geology and Mineral Industries require a minimum spacing pattern of 40 acres per well, unless a different spacing pattern is approved by the Department's governing board.

The procedures used in drilling development wells are about the same as those used for a wildcat well, except that there usually is less subsurface sampling, testing and evaluation.

Facilities required for development drilling may include access roads, well sites, flowlines, storage tank batteries, facilities to separate oil, gas and water, and injection wells for salt water disposal. In remote locations, camps and air strips may be required.

Access roads usually are better planned, located and constructed than those built for wildcat wells and must be approved by the Geological Survey in cooperation with BLM or the Forest Service. When an oil field is developed on a spacing pattern of 40 acres (16 hectares) per well, the wells are one fourth of a mile from each other. If a section (1 square mile) is developed with 16 wells, at least 4 miles (6.4 km) of access roads are built and 4 to 6 miles (6.4 to 9.6 km) of flowlines are installed between the wells and the tank batteries.

Surface uses in a gas field will be significantly less than in an oil field because gas wells usually are drilled on 160 acres (64 hectares) per well or larger spacing units. A 160 acre (64 hectare) per well spacing pattern allows no more than four wells per section and requires 2 miles (3.2 km) of access roads and pipelines. Separation and storage facilities are not required for gas production unless the production is rich in liquids or condensate. It may be sold without separation and the purchaser may separate the liquids at a central processing point far removed from the lease.

Production

Figure 4 illustrates an oil and gas field facility once a field is developed for production. The components and methods of production will be discussed in the followng paragraphs.

If the pressure in the petroleum reservoir is great enough to force the oil to the surface by itself, the result is a flowing well. The surface equipment at the head of a flowing well is usually limited to a series of valves known as a "Christmas tree" and a fenced area 15 by 15 to 50 by 50 feet (4.5 by 4.5 to 15 by 15 meters) around the well head and Christmas tree. This is a minimum of surface equipment and produces little or no sound.

However, most oil wells in the United States are not free flowing wells, thus must use some means of artificial lift to bring the oil to the surface. More than 90 percent of the nations's oil wells (1971 figures) were on artificial lift and most of the artificial lift wells used sucker rod pumps. These create some noise because of mechanical equipment. Other types of artificial lifts are hydraulic and centrifugal pumps. Some of the equipment is installed on the surface and requires either fuel or electric power lines. All generate noise, ranging from almost none for electric motors to high noise levels for single gas engines.

Injecting high pressure natural gas can also help bring petroleum to the surface. This method is used only when low cost natural gas is available and where pressure in the petroleum reservoir is sufficient to force the hydrocarbons part of the way up the well. The addition of gas lowers the specific gravity of the petroleum so that it completes its flow to the surface. This system is quiet and uses little surface. However, it will be used less frequently in the future as supplies of high pressure natural gas decline.

No pumping is needed in a well that produces natural gas; the pressure in the formation brings the gas to the surface. However, it may also bring water with it that can choke off the gas flow. In that case, a pump may be installed to remove the column of water. The surface use for a gas well is limited to a 20 by 20 foot or 6 by 6 meter area.

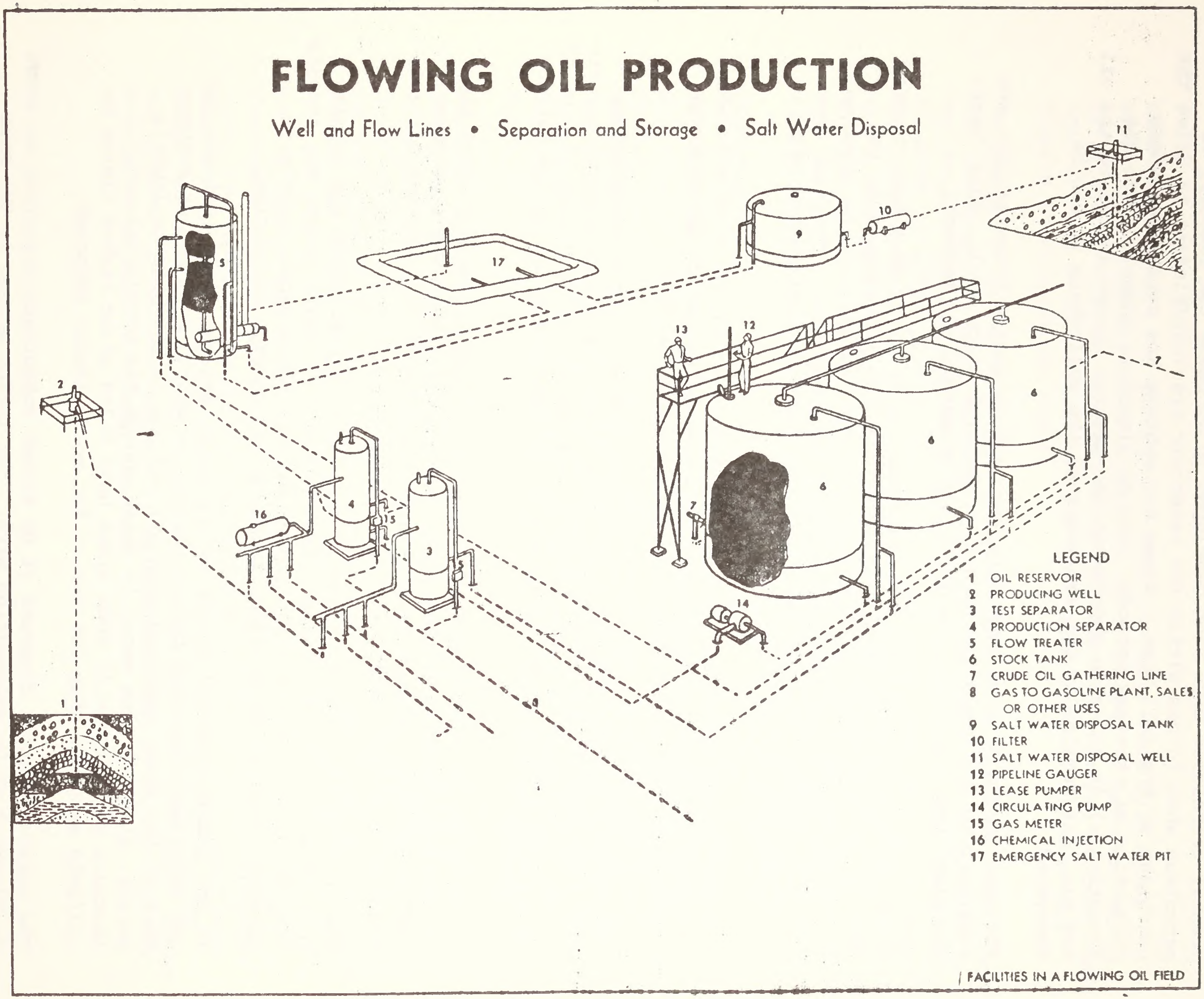

FLOWING OIL PRODUCTION
Well and Flow Lines • Separation and Storage • Salt Water Disposal
LEGEND
1 OIL RESERVOIR
2 PRODUCING WELL
3 TEST SEPARATOR
4 PRODUCTION SEPARATOR
5 FLOW TREATER
6 STOCK TANK
7 CRUDE OIL GATHERING LINE
8 GAS TO GASOLINE PLANT, SALES OR OTHER USES
9 SALT WATER DISPOSAL TANK
10 FILTER
11 SALT WATER DISPOSAL WELL
12 PIPELINE GAUGER
13 LEASE PUMPER
14 CIRCULATING PUMP
15 GAS METER
16 CHEMICAL INJECTION
17 EMERGENCY SALT WATER PIT
/ FACILITIES IN A FLOWING OIL FIELD

Figure 4. Facilities in a flowing oil field.

Several techniques have been developed to increase the recovery of petroleum when forces within the reservoir are insufficient to drive the petroleum to the well bore. These new mehtods are called secondary production or recovery methods. Gas or liquid is injected into the formation(s) in order to supplement the natural forces and drive the oil and gas that remains in the reservoir to the well where it can be recovered.

The most common form of secondary recovery is injecting water into the reservoir to force additional oil to the production well. This "water flooding" can increase recovery by approximately 100 percent.

Other secondary techniques for improving oil recovery have been tested, including miscible flooding (injecting chemical solutions into the reservoir), fire flooding (starting a controlled fire in the reservoir) and steam flooding (injecting steam in the reservoir). Tertiary recovery methods are any of the previously mentioned techniques after water flooding has been tried.

Some of the gaseous components may condense into liquid form and reduce the flow of the gas. To prevent this, additional gas is injected to maintain pressure above the condensation point for gas.

Once the oil and gas is brought to the surface, it is distributed by flowlines to a central collection point before it is transported directly off the lease area. The flowlines are usually 3 or 4 inch (7.6 or 10 cm) diameter steel pipes. They may be buried, installed on the surface or elevated.

An exception is natural gas, which is often sold at the well head and transported directly off the lease. If liquid hydrocarbons or water must be removed first, the gas may be transferred to a central collection point prior to sale.

The crude oil is stored in one or more steel tanks, which are usually located on or near the lease. (See Figure 4). Small leases may contain only one tank battery; large leases may contain several, with each battery including separating, treating and storage facilities.

If the fluids produced at the well contain gas and water, oil and gas and water are separated before the oil is stored in the tank battery. Most of the water produced with oil and gas is brackish to lightly saline, although some water is fresh enough for beneficial use. Ranchers and farmers in some areas have filed prior rights claims on oilfield water so they can use it for agricultural purposes.

The saline water is disposed of by either subsurface injection as shown in Figure 4 or by evaporation pits. The latter method is the more likely in eastern Oregon because of the arid climate and high evaporation rate. When salt water is disposed of underground, it is usually introduced into a subsurface horizon containing water of equal or poorer quality. These disposal wells are cased to protect fresh water aquifers from contamination.

Land requirements for oil field facilities range from 22.4 acres (9 hectares) per square mile (square km) to 2.4 acres (1 hectare) per square mile (2.56 sq. km) depending upon the well spacing pattern. Less land is used in gas fields because gas production usually does not require storage on the lease.

The number of people required to operate an oil or gas field varies with the characteristics of the production and the number of lease holders in the field. One employee in a large modern field can control production of about 25 wells if they flow without pumping. When wells are pumped, one employee in a large modern field can control production on 10 to 20 wells. If storage tanks are manually gauged and sampled, one person can service about 25 tanks. If automatic gauging and sampling devices have been installed, one employee can service 100 to 150 tanks. In a large field, one five man maintenance crew can service up to 50 wells.

Abandonment

The abandonment operations, like all the previous activities, are monitored by the Geological Survey and Oregon Department of Geology and Mineral Industries. Both dry wildcat wells and development wells are normally plugged before the drilling rig is removed since the operator can use the drilling rig to plug the hole and avoid bringing in other equipment. Once the drilling rig is removed, the surface and any reserve mud pit is restored to its original condition as much as possible.

When the operator wishes to abandon a producing well, he must demonstrate its unsuitability for further profitable production to the Geological Survey district engineer. In some cases, wells are plugged (with cement) as soon as they are depleted. Sometimes depleted wells are not plugged immediately, but are allowed to stand idle for possible better use in a secondary recovery program.

When an oil or gas field is depleted and the entire lease will be abandoned, all surface equipment is removed. Flowlines and injection lines that had been buried are usually left in place. The operator's bond with the federal government is not terminated until BLM or the Forest Service has approved surface restorations, the Geological Survey has approved subsequent reports of abandonment, and royalties due the federal government have been received.

ADMINISTRATIVE PROCEDURES

Before we discuss what administrative procedures are involved, it is necessary to examine roles that the Bureau of Land Management, the U. S. Forest Service and the U. S. Geological Survey have in an oil and gas leasing program.

The Bureau of Land Management administers federal laws and regulations pertaining to mineral resources on lands under its primary jurisdiction (i.e., national resource lands) and those withdrawn for other agencies, including the Forest Service, and on private lands when the government owns the subsurface mineral rights. BLM, in consultation with the U. S. Geological Survey, and any other federal agency with surface management jurisdiction over lands in the area, determines whether and under what conditions federal oil and gas leases will be issued.

After the lease is issued on lands administered by BLM or the Forest Service, the Geological Survey oversees the oil and gas activities in the "area of operations" (see following section on "Post-Lease Procedures" for a definition of "area of operations"). They are responsible for maintaining and providing engineering, geological, geophysical, economic and other technical expertise to assure compliance with applicable laws, regulations and Interior Department objectives. They also ensure that the operator complies with any surface stipulations that the BLM or Forest Service have written into the lease. For a comprehensive view of the administrative procedures involved in an oil and gas leasing program, see Figure 5.

Pre-Lease

The first step in oil and gas exploration is conducting a geophysical survey over an area favorable for oil and gas. If an operator wants to survey BLM or Forest Service administered lands that he has not leased for oil and gas, he must file a Notice of Intent and a bond with the BLM or Special Use Permit and bond with the Forest Service before entering the land. When he signs the Notice of Intent or Special Use Permit, the operator agrees to conduct the exploration according to BLM and Forest Service terms and conditions, which are designed to minimize any potential adverse impacts. Upon completion of the survey, if the operator has complied with all of the stipulations, he will be released from the bond.

If the results of the geophysical survey are favorable, the operator will apply for an oil and gas lease. Many times, in order to protect the prospect from competitive speculation, the operator applies for more acreage than is needed to develop the resource. Once the application is received, then BLM and the Forest Service land use plannig process goes into effect.

BLM's land use planning process constrains and guides oil and gas leasing on national resource lands. Oil and gas production is one of many possible land uses considered in the Bureau's planning system. Once the existing resources have been inventoried in the Unit Resource Analysis and after the public has had an opportunity to contribute ideas and suggestions on how the land should be managed, BLM develops a Management Framework Plan, which indicates how land uses in the planning area will be coordinated and identifies constraints and parameters for future activities in the area. Management Framework Plans have been prepared for all areas prospectively valuable for oil and gas in eastern Oregon. Since land use planning is a dynamic process, the Management Framework Plans are revised and updated as the need arises.

The Forest Service uses a similar process in their land use planning. The procedural steps involved in their unit planning process are:

1. Develop a planning system and establish management objectives.
2. Collect and evaluate resource data.
3. Analyze and display resource data.
4. Determine suitability based on capabilities and limitations of the land.
5. Develop allocation alternatives.
6. Present alternatives to the public in a draft environmental statement.
7. Prepare a final environmental statement that responds to all comments received on the draft and that presents the proposed allocation action.
8. Prepare the final land use plan incorporating public comment on proposed action.

The Ochoco National Forest Land Use Plan is made up of two segments. Part I consists of the present situation, assumptions for the future and broad coordinating requirements. This part has been completed and is currently available.

Part II, now being developed, will determine the lands suitable for production of desired combinations of resource uses while providing adequate protection to the environment.

Once land use plans have been developed, BLM or Forest Service prepares an Environmental Analysis Record (EAR) on the oil and gas lease application area. The Environmental Analysis Record describes the setting in which the action is to occur, possible environmental impacts of the proposed action and recommend measures that would reduce adverse impacts of the proposed action.

BLM and the Forest Service then use information gathered in the land use planning and environmental analysis processes to determine whether oil and gas leases will be issued for specific lands and, if so, the special conditions to which the prospective lessees must first agree.

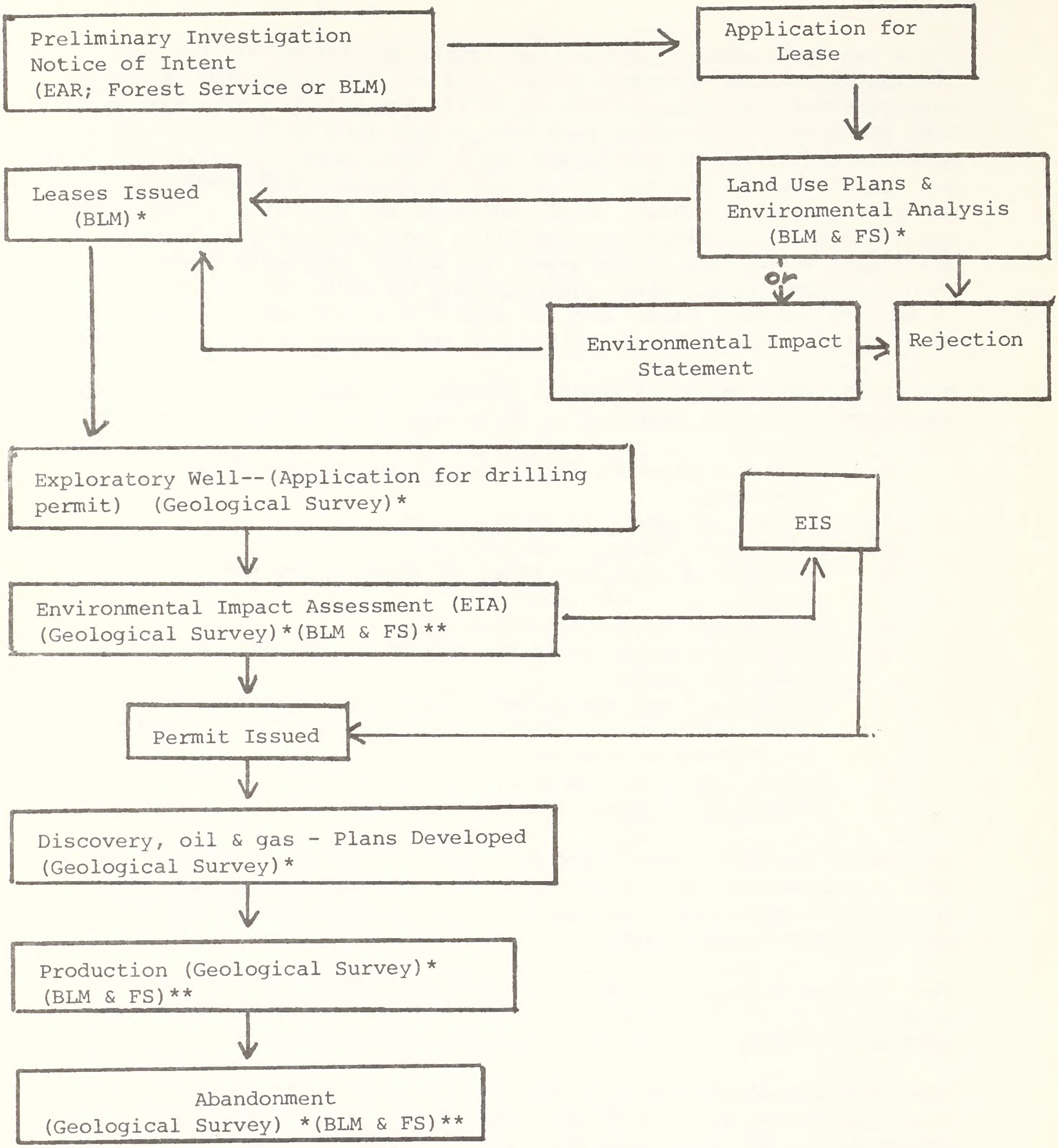

Preliminary Investigation
Notice of Intent
(EAR; Forest Service or BLM)
Application for Lease
Land Use Plans & Environmental Analysis (BLM & FS)*
Leases Issued (BLM)*
or
Environmental Impact Statement
Rejection
Exploratory Well--(Application for drilling permit) (Geological Survey)*
EIS
Environmental Impact Assessment (EIA) (Geological Survey)*(BLM & FS)**
Permit Issued
Discovery, oil & gas - Plans Developed (Geological Survey)*
Production (Geological Survey)* (BLM & FS)**
Abandonment (Geological Survey) *(BLM & FS)**

FIGURE 5. Administrative Procedures in an Oil and Gas Leasing Program

* primary responsibility

** secondary or advisory responsibility

Most of the special stipulations in recent oil and gas leases relate to the prevention or mitigation of unfavorable environmental impacts.

All oil and gas leases now issued by BLM and the Forest Servide contain an open ended set of stipulations. These stipulations ensure that after the lease is issued, USFS and BLM will have additional opportunities to specify measures the lessee must take to protect environmental values.

Oil and gas leases may also contain site specific stipulations. These stipulations are developed individually for each lease area as a result of identified impacts on the specific resources affected within the area.

Before a lease is issued, the Geological Survey prepares a classification report to determine whether the lease will be issued on a competitive or noncompetitive basis. Competitive leases are issued within known geologic structures (KGS's) and noncompetitive leases are issued outside KGS's.

No known geologic structures have been identified in Oregon. An area is classified as being within a known geologic structure if it is within the trap of a producing oil and gas field as best as can be determined from the geological data available at the time. If the area is in a KGS, it is not available for leasing until it is offered at a competitive lease sale.

Lease Issuance

If all the above factors qualify an area, a lease is issued on a noncompetitive basis to the first qualified applicant if the land is legally available and if USGS determines that it is not in a KGS. Noncompetitive leases are currently issued for a primary term of 10 years.

Lessees must furnish bonds conditioned upon compliance with the lease stipulations. Bonds must be furnished before a competitive lease is issued and before a drilling permit is issued on a noncompetitive lease.

Post Lease Procedures

During the term of the lease, the Geological Survey supervises operations of the lessee in that portion of the lease tract within that has been legally defined as the "area of operations." Each "area of operations" is specifically defined in the lessee's drilling permit application and generally refers to the area of direct exploratory activity. BLM and the Forest Service recommend surface protection and rehabilitation measures before the Geological Survey acts on the drilling permit. BLM and the Forest Service supervise the activities outside the area of operations.

The "open ended" lease stipulation requires the lessee, before entering the land, to submit for approval to the Geological Survey a map and surface use plan explaining the nature of the anticipated activity, surface disturbance and appropriate rehabilitation measures. The lessee also submits this information to BLM and the Forest Service. If the lessee proposes to conduct any activities that would disturb the environment, he will be required to obtain approval from the Survey at least once during the life of the lease. If he finds oil or gas and wishes to drill additional wells to develop the field or construct facilities needed to reach full production, he will be required to return to the Survey for approval of plans for each new stage of development.

For all exploratory well proposals, the USGS prepares an environmental analysis in consultation with BLM and the Forest Servide (Figure 5). If the BLM or Forest Service so requests, the Geological Survey will hold a joint field inspection with the operator, BLM and the Forest Service to analyze the environmental impacts of the proposed action. Stipulations are attached to the drilling permit to minimize adverse environmental impacts. The lessee may be asked to change the proposed well site if drilling in the original location would have severe environmental impacts.

If oil or gas is discovered, lessees are required to submit additional lease development plans to the Geological Survey for approval (Figure 5). The Geological Survey ensures that proper construction methods are followed in the lease and drilling permits. Stipulations must meet the approval of the other resource management agencies. The lessee is required to prepare for contingencies such as fires, accidents, blowouts, spills and leaks, and to notify various State and Federal agencies, such as the Environmental Protection Agency, in the event of an oil leak or spill.

The Environmental Protection Agency (EPA) regulates and identifies procedures, methods and equipment to be used to prevent the discharge of oil from nontransportation related onshore and offshore facilities into navigable water. These regulations apply to owners and operators engaged in drilling, producing or gathering oil and gas. Oil and gas operators must file a spill prevention control and countermeasure plan with the EPA.

Such an operation must meet not only Federal but State requirements. In Oregon, the State Department of Geology and Mineral Industries (DOGAMI) requires a permit for any drilling operation. The agency must also approve casing and cementing programs designed to prevent leakage of contaminating fluids, inspect blowout prevention equipment, witness abandonment plugging and collect well records. In the event of a discovery, the Department's rules require uniform development, location and spacing of wells and regular reporting of storage and production.

The State Department of Environmental Quality (DEQ) may add conditions to the state drilling permit that enforce compliance with state air and water quality laws.

Before a drilling permit is issued, the application is reviewed by the Oregon Department of Environmental Quality (DEQ), the Water Resources Department, the Department of Fish and Wildlife and the Department of Land Conservation and Development (LCDC).

lands. The lease area contains several grazing allotments that provide forage for a maximum of 4,967 AUMs. Table 2 lists the use areas, user's name, time of use and number of AUMs. These lands are also managed for wildlife habitat, watershed, open space and recreation.

The area contains 18 to 25 developed sites that provide mineral materials for road building. Most of these are concentrated in the extreme southeastern corner of the area and contain black, gray and red cinders, or pumice.

Burns Butte, also in the southeastern corner of the area, is a prominent hill, which overlooks the urban area of Burns-Hines 3 miles to the east. Owned by the State of Oregon, this is the site of television translators and most radio base stations and/or repeaters for the area.

About one mile to the southwest of Burns Butte is a butte known locally as Radar Hill, which is the site of a de-activated radar facility. Built in the mid 1950s, this 20 acre site was manned by the U.S. Air Force until it was de-activated in 1970. The 2 million dollar facility is now owned by the local high school district, which is moving the buildings to Burns and will eventually abandon the site.

The extreme southeastern corner of the area (Sections 26 and 35) is a mixture of industrial, commercial and residential properties immediately south of the Hines city limits. A large portion of the Edward Hines Lumber Company mill (a plywood factory and a saw and lumber mill) is within one of the private leases. Shops, offices, warehouses, railroads and part of the factory itself are located on this ground. A service station, mobile home court and single family residences are also within the area.

All the uses described are considered physically compatible in their present intensity, with some minor exceptions. For example, the number of mineral material source sites near Burns-Hines is in excess of need, to the detriment of the visual resource, livestock grazing and wildlife habitat.

Conflicts between some forms of recreation such as target shooting and livestock grazing occasionally occur, but is not a major problem. Other existing and potential conflicts occur between wildlife, livestock grazing, watershed, timber harvest, ORV users and certain types of recreation.

The lands are suitable for all existing uses at present levels. Use changes in the industrial-commercial-residential area may be closely regulated by zoning, but the outlying private areas are less intensively regulated. Some activities in the federal lands are closely regulated (logging, site development), while others (extensive recreation) are virtually uncontrolled.

TABLE 1

LAND OWERNSHIP AND STATUS *

Land Category	Acres	Percent of Total Area
National Forest Lands - Application Stage	53,006.04	50.2
National Resource Lands - Application Stage	12,542.42	11.9
National Resource Lands - Leased	16,653.27	15.8
Total Federal Lands	82,201.73	77.9
State of Oregon Lands - Application Stage	80.00	
State of Oregon - Leased	2,520.00	2.5
Total State Lands	2,600.00	2.5
Private Lands with Federal Mineral Estate - Application Stage	1,180.96	1.1
Private Lands with Federal Mineral Estate - Leased	360.00	0.3
Private Lands and Mineral Estate - Leased	19,242.76	18.2
Total Private Lands	20,783.72	19.6
Total Lands Involved	105,585.45	100.0

* (See Figure 2)

Table 2
Livestock Grazing Use

Allotment	User	Time of Use	No. of AUMs[a]
Sagehen Use Area	G. McGee	5-1 to 9-30	700
Sagehen Use Area	M. Morgan	4-1 to 10-31	1,148
Sagehen Use Area	D. Miller	4-1 to 10-31	973
Sagehen Use Area	C. Baker	4-1 to 10-31	537
Goulden	Hotchkiss Co.	4-16 to 10-15	881
Zogleman	M. Morgan	5-1 to 9-30	568
Winslow		6-20 to 7-20	1,000[b]
*Donnelly S & G		7-1 to 10-15	3,500[b]
*Bear Butte		7-1 to 10-15	3,500[b]
+Green Butte		6-19 to 9-3	974

* These sheep allotments will have 300 head of cattle from 6-16 to 9-30 during 1976.

+ Season variable 312 head and 88 head.

[a] Animal unit months.

[b] Sheep months.

Table 5

Some Dominant Grasses, Forbs, Browse, Aquatics and Trees

Grasses and Grasslike Plants	Genus and Species
Bluebunch wheatgrass	Agropyron spicatum
Giant Wild rye	Elymus cinereus
Idaho fescue	Festuca idahoensis
Junegrass	Koeleria cristata
Indian ricegrass	Oryzopsis hymenoides
Browse	
Low sage	Artemesia arbuscula
Big sage	Artemesia tridentata
Mountain mahogany	Cercocarpus ledifolius
Rubber rabbitbrush (gray)	Chrysothamnus nauseosus
Rabbitbrush (green)	Chrysothamnus vicidiflorus
Shrubby buckwheat	Erigonium spp.
Hopsage	Grayia spinozoa
Juniper	Juniperus spp.
Bitterbrush	Purshia tridentata
Forbs	
Common yarrow	Achillea millifolium lanulosa
Wild onion	Allium spp.
Annuals-dry	
Biscuitroot-carrot top	Lomatium spp.
Lupine	Lipunus spp.
Aquatic Plants	
Water buttercup	Ranunculus sp.
Water cress	Rorippa sp.
Cattail	Typha latifolia
Pondweed	Potamogeton crispus
	Potamogeton pectinatus
Rush	Juncus sp.
Horsetail	Equisetum sp.
Milfoil	Myriophllum sp.
Coontail	Ceratophyllum sp.
Arrowhead	Sagittaria sp.
Duckweed	Lemna sp.
Smartweed	Polygonum sp.
Trees	
Douglas-fir	Pseudotsuga menzeisii
Ponderosa pine	Pinus ponderosa
Western larch	Larix occidentalis
White fir	Abies concolor
	Abies grandis
Quaking aspen	Populus tremuloides
Juniper	Juniper sp.

and low species. Other important vegetation types of this zone are rabbitbrush and bitterbrush, with juniper and mountian mahogany on the higher ridges. The important grasses and grasslike plants are bluebunch wheatgrass, giant wild rye, junegrass and Idaho fescue with yarrow and dry annuals a less common species.

At higher elevations, juniper and mountain mahogany are predominate with lesser amounts of the grasses.

The forest zone consists predominately of ponderosa pine with some Douglas-fir, western larch and white fir on the north facing slopes. Aspen are found locally and alder, willow and cottonwood along streams. Of the 52,883 acres of timber on National Forest Lands, 35,675 are commercial forest and 17,208 are non-commercial. The volume varies depending upon location. The ridges and south slopes support about 5 million board feet; the draws and north slopes support about 25 million board feet. The average commercial timber volume in this area is 9-1/4 million board feet. The commercial stands contain 95 percent ponderosa pine and 5 percent Douglas-fir. Table 5 lists the more common species of trees that exist in the area. Bluebunch wheatgrass and Idaho fescue are commonly found under the conifer trees. Local areas in the forest may contain low and big sagebrush, bitterbrush and mountain mahogany.

The aquatic plants prevail in the streams and reservoirs. These species (Table 5) are not significant in this area because of the limited habitat.

Selected References

Franklin, J. F., Dyrness, C. T., 1973, Natural Vegetation of Oregon and Washington: USDA Forest Service General Technical Report PNW-8; USDA, Forest Service, Portland, Oregon.

Department of Interior, Fish and Wildlife Service, 1975, Threatened or Endangered Fauna or Flora; Federal Register, Part V, Vol. 40, No. 127.

Wildlife

This is a summary of wildlife values in the oil and gas lease area. Figure 8 depicts the habitat areas of some of the species described in this summary. None of these habitat areas have been identified as critical.

Mule deer occupy the lease area both in winter and summer as shown in Figure 8. The distribution of water, cover and forage in the area is good. Deer remain in the Emigrant Butte-Stinger Creek vicinity until January or when snow forces them to lower elevations, outside of the lease area. Oregon Department of Fish and Wildlife estimates that an average of 800 deer winter here from fall to January, but presently there are an estimated 400. During normal years, an estimated 500 deer

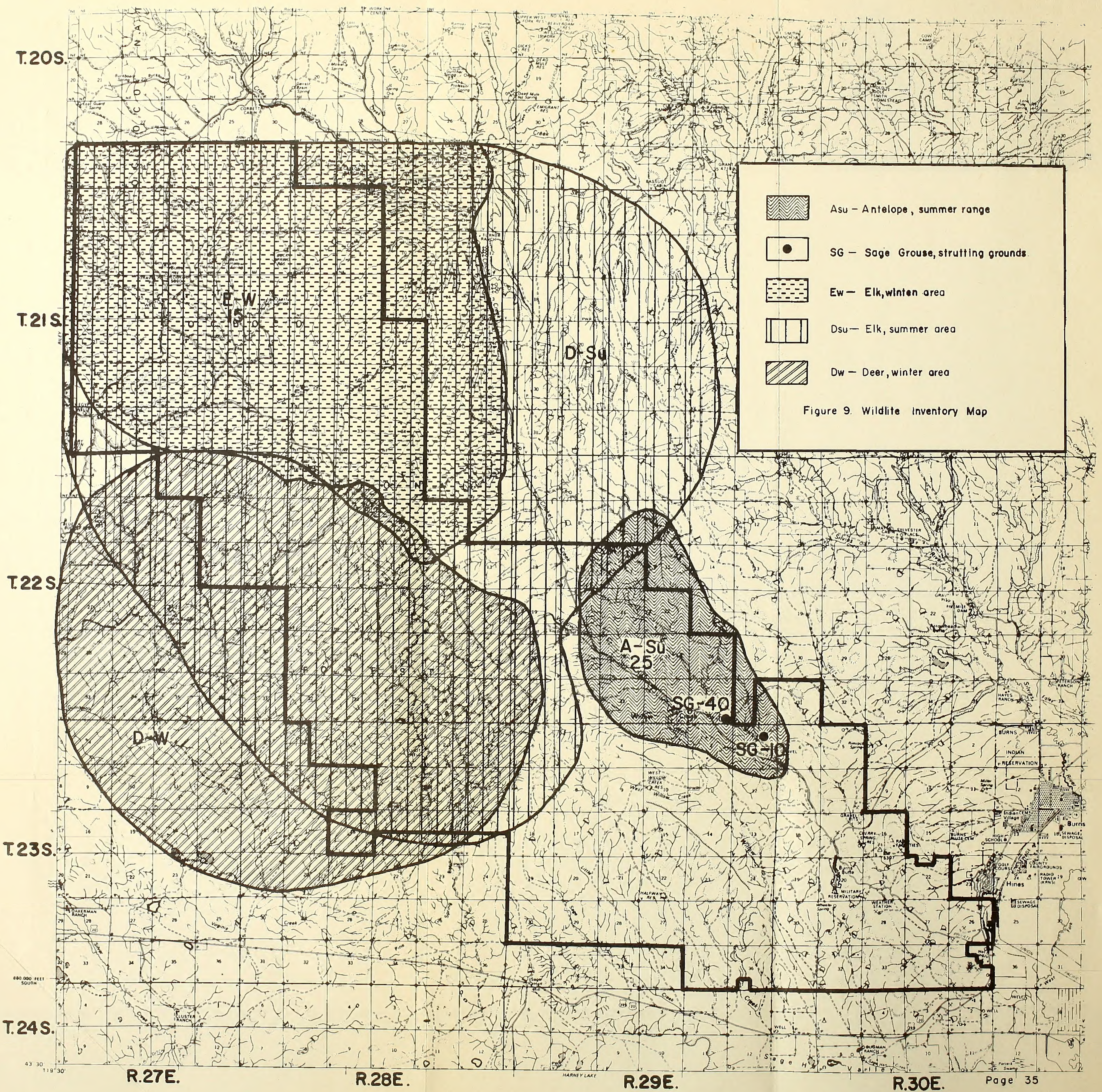


Figure 9. Wildlife Inventory Map

(ten year average) summer in the area, but the current population is estimated at 300 deer.

There is occasional elk summer-fall use in the Little Emigrant Creek area (Figure 8); usually fewer than 20 elk. Occasionally, elk are taken in the area by hunters. The distrubution of cover, water and forage is good for deer and elk. No specific deer and elk migration paths, fawning and calving areas have been located.

An estimated 20 antelope summer in the area. The hunting pressure on antelope is light.

Two sage grouse strutting grounds have been located in or adjacent to the lease area on private lands. An average of 25 to 50 sage grouse use the strutting grounds in T. 22 S., R. 29 E., Section 35, during the spring and about 8 to 10 birds use the strutting grounds in T. 23 S., R. 29 E., Section 1.

A great variety of nongame animals inhabit or may occur in the area, Appendix B. Sixty-four species of mammals, 167 species of birds, 5 species of amphibians, 12 species of reptiles and 8 species of fish may be found in the area.

Some of the more colorful birds are the common flicker, black-billed magpie, mountain bluebird and red-tailed hawk. No species of mammal, amphibian or reptile on the state and federal lists of endangered species is known to breed in the area. Northern bald eagles on the State Endangered Species list, winter in the southern part of the lease area and golden eagles are year-long residents, although no nests have been located.

Redband trout are found in Little Emigrant Creek. The U. S. Forest Service considers Little Emigrant Creek a Class Ia stream from Little Emigrant spring downstream and a Class IIb stream upstream.

a. Class I. Perennial or intermittent streams or segments thereof that have one or more of the following characteristics:

   Direct source of water for domestic use (cities, recreation sites, etc.).

   Used by large numbers of fish for spawning, rearing or migration.

   Flow enough water to have a major influence on water quality of a Class I stream.

b. Class II. Perennial or intermittent streams or segments thereof that have one or both of the following characteristics:

   Used by moderate though significant numbers of fish for spawning, rearing or migration.

> Flow enough water to have only a moderate and not clearly identifiable influence on downstream quality of a Class I stream, or have a major influence on a Class II stream.

Willow Creek Reservoir supports a fisheries for stocked rainbow trout, but some years there is inadequate water for fish life.

Malheur sculpin, a naturally rare fish of Oregon may exist in the perennial streams. Other fish species that may be found in the area are listed in Appendix B.

The area is habitat for a great variety of wildlife in addition to those species already discussed. Lists of these species that are known to occur or may occur are found in Appendix B. An additional inventory list and narrative is available in Oregon's Department of Fish and Wildlife letter to BLM located in the Public Interest Section (Appendix K).

Ecological Interrelationships

Because of the variety of sites and corresponding plant communities, plant successions are complex and diversified. The following is a broad overview of the more prominent successional patterns.

Timber sites are restricted to higher elevations with sufficient moisture and appropriate soils. The greatest impact on plant succession on these sites is complete timber removal by man or nature. Restoration takes many decades and is subject to many variables. One of the most important is distance from a seed source.

Juniper woodlands are dependent upon different factors. The older juniper trees are generally found in small swales and on rocky ridges with relatively deep soil between the rocks. Heavy grazing over a prolonged period and suppression of natural fires have greatly extended the area covered by this species. Juniper is adapted to a wide range of sites and with adequate moisture it may invade rapidly as perennial grasses and shrubs lose vigor. Once established, juniper generally maintains dominance of a site. Perennial grasses and shrubs are forced out and tree interspaces support annual forbs and grasses. The degree of plant variety decreases with the severity of the site.

The sagebrush communities can be broken into two general categories--big sagebrush and low sagebrush. Low sage generally occurs on the shallow stony sites of well drained upland plateaus.

Big sagebrush is best adapted to deep, well drained soils and is often found in association with bitterbrush and rabbitbrush. Due to the combination many of the preferred browse and grass species have declined and the extent and density of sagebrush and rabbitbrush have increased.

On many deer winter ranges, sagebrush is a critical browse. This grazing use, domestic livestock grazing, plus other land disturbances, has resulted in an increase in gray rabbitbrush and cheatgrass.

There are other factors besides grazing that have initiated ecological changes. Road building, hunting and recreation use have caused deteriorated conditions in varying degrees.

These deteriorated conditions allow increased runoff and a consequent increase in soil movement. Poor watershed conditions cause increased sediment loads from sheet, rill, gully and channel erosion. Erosion reduces the plant production potential by reducing soil fertility, thus reducing the availability of suitable habitat for forage species.

The natural ecological trend is slow movement towards a mature stand of dominant species. Many successions initiated by past improper land uses are reversible. The reversal of the pattern, especially if time is important, may require drastic action such as chemical and/or mechanical vegetation conversion for wildlife, watershed and livestock values.

Food and Community Relationships

Within the lease area there are numerous food relationships between plants and animals. All are dependent initially upon the production of food materials by green plants. The existing vegetation and many other environmental factors dictate what animal species will inhabit an area.

Deer are dependent upon specific seasonal use areas to provide year long forage, water and cover. Forage requirements and availability change with the season. As previously identified in the wildlife section, the Emigrant Butte-Stinger Creek area provides some 400 deer with winter range until January. The wintering deer require a variety of shrubby browse plants and lesser amounts of herbaceous plants.

Domestic livestock, on the other hand, do not require the same variety of forage. They can survive some seasons on strictly a grass diet.

Predators such as coyotes, bobcats, badgers and raptors prey primarily on rodents, rabbits, other small mammals and reptiles. Rodent and rabbit populations are somewhat cyclic and governed to a large extent by production of forage and seeds for food. During periods of low rodent and rabbit populations predators may shift to prey species that are available or may change feeding ranges until food sources improve.

The most critical component of all the food relationships is water. The seasonal and geographic distribution of water supplies strongly influence the numbers and distribution of floral and faunal species. Water developments such as spring improvement and reservoir construction often enhance and expand habitat for many species. Natural water supplies may require supplementation, particularly in drought years, in order to sustain dependent populations. The water supply is often the limiting factor in the food chain.

Human Values

Although it does not contain as much variety as other parts of Oregon, the lease area does possess different topographic features and vegetative types. It is a transition zone between the Harney Basin, a closed basin of meadowland and sagebrush-greasewood covered rangeland and the Blue Mountain Range, which supports one of the nation's larger ponderosa pine belts. Although roads, stockwatering ponds, logged areas and fences make one aware of man's activities, there still remain elements of open spaces.

Socio-Cultural Interests

The first white men to appear in Harney County were fur trappers and traders in about 1826. There they found northern Paiute Indians, who inhabited southeastern Oregon. The Ochoco Mountains were a namesake of Chief Ochoco, whose band used the Ochoco Valley as a camping ground.

Later, wagon trains going to the Willamette Valley transversed the basin, but homesteaders did not begin to settle until about 1860. About 1865, in order to protect these settlers, General William Selby Harney became commander of the territory of Oregon. It was from him that Harney County was named.

The town of Burns wasn't founded until 1884 when George McGowan named the town after the Scottish poet Robert Burns and a post office was opened. The small community progressed slowly until the coming of the railroad in 1924 and the construction of the mill in Hines in 1930. Today, Harney County has a population of about 7,200, 4,700 of which reside in the towns of Burns and Hines.

Many county organizations and individuals preserve the flavor of the old west by purchasing and retaining old historic relics. Harney County has an active historical society and historical museum.

Selected References

Harney County Chamber of Commerce.

Brimlow, G. F., 1951, Harney County, Oregon, and its Rangeland: Metropolitan Press, Portland, Oregon.

Archaeology

The literature search for the Burns-Ochoco lease area included review of all relevant archaeological and historical sources available. Theoretical works concerned with the major problems of Great Basin archaeology were carefully consulted. A detailed report is contained in Appendix C of this study.

Persons knowledgeable of the area were contacted. This information is contained in the body of the detailed report and copies of their replies are included in the appendix.

The Burns-Ochoco lease area has significant potential for cultural resources. The Harney/Malheur Basin is the remnant of a Pleistocene Lake. The foothills of the Ochoco Mountains constitute its former shore and should contain evidence of ancient occupation. An exceptionally large obsidian quarry exists on and adjacent to Burns Butte. Archaeological sites are also known of in the vicinity of Sage Hen Hill. A more comprehensive report is found in Appendix C.

Social Welfare

More than half of Harney County's population is centered in the Burns-Hines area and the rest is sparsely scattered throughout the county. The rural population is based primarily on ranching. Harney has the smallest population density in the state and has had little migration over the years, so that the slow growth can be attributed to natural increases. The major industries are lumber, livestock agriculture and tourism. Wood products and lumbering are by far the largest industries in the area with wood products contributing 55 percent of the total payroll for the county. Most of the timber comes from the Ochoco and Malheur National Forests.

Livestock inventories have not increased, partly because of the recent troubled beef markets, but does show strong secondary employment characteristics. Moreover, the Bureau of Land Management has a profound impact on livestock production in the county.

The recreation industry brings little income into the county because the tourist often drives a stocked camper and stays in campgrounds.

Although job opportunities are limited, income levels are healthy. Per capita income and median household cash income are both above state averages with a median income per capita of $7,429.

Even during the economic downturn of 1975, unemployment was only 7.7 percent. Employment opportunities are most numerous in semi-skilled and unskilled categories but professional jobs remain scarce. The trades, services and government sectors show cutbacks whenever there is a slight economic downturn.

The services provided in the county are typical for a county with a small population and limited tax base. The per pupil school costs are about equal to the state average, partly because of the small school age population and high operating costs. Expenditures per pupil were $1,248 in 1972-73. The county's health budget is about average for the state. However, the health center in Burns lacks adequate facilities and is scheduled for modernization. There are no special health projects in Burns, but there is a relatively large mental health budget for the county.

Only a few service organizations are available to county residents as compared with most county organizations and reflects the long distances separating residents of Harney County.

Selected References

Beecherl, A., 1975, A Social and Economic Profile of Eastern Oregon Counties: BLM Report (Western Interstate Commission for Higher Education, Boulder, Colorado).

Attitudes and Expectations

Harney County began as a cattle ranching area and has remained such since its early days. But today, in order to survive, ranches require larger acreages and equipment investments than ever before. When it was introduced in the 1930's, the lumber industry brought diversification to the county's economy and will remain a stable element of the economy, but with little future growth.

Because of the lifestyle of hard physical labor, Harney citizens have developed an attitude and value system based on the work ethic and self-sufficiency. As cattlemen and farmers, they see themselves as vestiges of the American pioneering struggle to survive. In them, the traditions of the old west still remain, and they, like their ancestors, would struggle to protect their way of life. However, potential conflicts may arise because of the growth of the recreation-tourist industry. The tourists are seen as "outsiders" to the local people and they feel that these outside influences may erode their values and way of life.

Special interest groups have become an influential force, particularly in the areas of BLM management actions. The special interest groups probably neither support nor oppose the majority of BLM decisions unless the specific action affects their interests or livelihood. Their involvement may then become substantial.

It is difficult to assess the general public's attitudes and expectations about oil and gas leasing in Harney County because of the lack of recent leasing or exploratory activity. Only in early years were exploratory holes drilled and these were mostly shallow. Of the 11 exploratory test wells drilled in Harney County, only one (the United Company of Oregon and Weed and Poteet Well) was drilled to a depth greater than 5,000 feet (1650 m). This well penetrated 6,480 feet (1944 m) of volcanic flows and pyroclastic material that was concurrently deposited with greenish clays and silts. The well had reported traces of hydrocarbons and several other shallower wells indicated small flows of gas or traces of oil.

Standard Oil of California, with an exploratory test well, hopes to intersect the continental sediments (clay, sands, silts) that contain oil and/or gas or volcanic units that have captured the migrating oil and gas accumulation. Chances of striking a pay zone are slim, for the national average of discovering a pay zone in 1974 was 1 in 7, and the chances of finding oil or gas in significant amounts were 1 in 59.

Since oil and gas activity is so limited in the county, energy development is not discussed in the "Comprehensive Land Use Plan" published by the Harney County Planning Commission in 1972. Nevertheless, the policy of the Planning Commission is a reflection of the county's attitude toward any future development in the county. The policy of the Planning Commission is:

1. To preserve an environment that will encourage and enhance existing and future industries, thus maintaining a continuing and vigorous economic expansion of the industries involved.
2. To encourage new industries compatible with the natural resources to develop within the county, consequently located and compatible with their needs and available resource. However, it is essential that the Harney County Planning Commission maintain an orderly and systematic use of all resources, thus assuring wise land use planning.
3. To encourage commercial development in concentrated clusters rather than strip areas along streets and highways.
4. To encourage commercial and industrial development to design an attractive construction so as to be compatible to the surrounding businesses and uses.
5. To encourage commercial facilities to locate within present or planned water service areas.

Private land owners, whose land comprises 20 percent of the analysis area, have leased their oil and gas rights to Standard Oil of California. They are interested in obtaining an added source of income.

Selected References

Mineral & Water Resources of Oregon, 1969, Bull. 64, State of Oregon Dept. Geology and Mineral Industries.

Beecherl, J., 1975, A Social and Economic Profile of Eastern Oregon Counties: BLM Report.

Local Regulatory Structure

A Harney County planning and zoning ordinance that guides development outside the incorporated communities of Burns and Hines was adopted in 1971. This ordinance has classified most of the study area as an agricultural zone, which is described as "extended to preserve certain land exclusively for agricultural and related uses which land while so used is exempt from zoning and land use regulations." This ordinance also states that it will prevent intensive development" in areas where proper community services are not readily available, where certain activities would be in conflict with an orderly development of suburban areas, or where agricultural and related operations constitute the most appropriate use of the land."

Oil and gas operations are mentioned as one of the conditional uses of the land under this ordinance. The county planning commission, which is composed of residents appointed by the court, regulates these conditional uses on a case-by-case basis.

ANTICIPATED ENVIRONMENTAL IMPACTS

Introduction

This section describes the anticipated environmental impacts of oil and gas activities on the components which were identified in the previous chapter. The five phases of an oil and gas operation, as described in chapter one, comprise a step by step procedure with each succeeding step dependent upon successful indications in the previous step. Only a few oil and gas explorations go beyond the drilling of a wildcat well. Nevertheless, each succeeding phase is a more intensive operation with the degree of environmental impact greater than in the previous phase.

This portion of the analysis is based on the premise that an exploratory wildcat well could lead to oil and gas discoveries on any lease tract, even though the probabilities are slim. The impacts described will not include those resulting from the transportation of crude oil to refineries or the refining of petroleum products. This analysis defies those impacts resulting from oil and gas field operations.

Many of the impacts discussed in this chapter would occur only if federal and/or state requirements were not met.

Preliminary Investigation

Most of the activities conducted in a preliminary investigation cause little or no surface disturbance. Examples are geological, geochemical and certain geophysical surveys. These surveys involve access by foot or vehicle transportation via existing roads and trails. They have little or no impact on the environment.

The most intensive use that may occur during a preliminary investigation is a seismic survey, which may involve clearing new access trails, using off-road vehicles, moving heavy equipment and in some cases, using explosives. Standard Oil of California (Chevron) conducted their seismic survey in 1971 under a Notice of Intent to Conduct Geophysical Operations, which was filed in the Burns BLM Office. They restricted their activity to existing trails and roads. They used a few explosives that resulted in some dust and noise. Those were the only impacts associated with their preliminary work.

Exploration

Exploratory activities take place after the leases have been issued and are associated with drilling a wildcat well. This operation is described in Chapter One.

Constructing an access road, clearing the drill site pad, and moving heavy equipment would cause some air pollution. These activities may also result in destruction of vegetation, soil compaction and erosion, and a decrease in water quality.

Vehicle and heavy equipment traffic over unsurfaced roads during dry weather would raise heavy clouds of dust. The machinery would produce exhaust fumes, particulate matter and oxides of sulfur, nitrogen and carbon.

Any surface disturbance such as the construction of roads or drilling sites means adverse impacts on the vegetation. As heavy machinery compacts the soild, growth and reduction of available water suppresses plant growth. The potential for soil compaction is greatest when the soil is wet.

Soil is perhaps the most adversely impacted resource affected in this and later stages of an oil and gas operation. When vegetation is cleared, soils become more susceptible to erosion. If streams are forded without proper protection, the streambanks may erode and the soil may wash downstream. Generally, soil erosion depends greatly on soil compaction and vegetation removal.

The primary impact on water might be an increase in sediments in streams. Building roads and clearing operational sites could intensify siltation, especially if roads were hastily constructed by bulldozer and streams were forded by heavy equipment. Siltation can form barriers in streams and when the barrier breaks, the suddenly rapid flow can sharply increase the suspended sediment load.

Any surface disturbance would have a direct impact on archeological values. Disturbances of archeological sites mean not only loss of artificial materials, but destruction of site stratigraphy. Site stratigraphy is imperative for archeological studies. Surface sites are particularly vulnerable as merely clearing an area may completely remove the site. During excavations in the exploratory phase of oil and gas development, unknown sites may be encountered and destroyed.

Indirect impacts on archeological resources may also be associated with exploration for oil and gas. New or improved roads would provide access to the sites. Consequently more people, including amateur collectors, would invade the area. This "pothunting" is one of the major causes of site destruction in the United States. Only the areas not readily accessible to the public have escaped this type of damage.

Certain geologic hazards can be associated with a drilling. Fluids such as water and/or oil may be withdrawn leaving an underground void. The area above the void may collapse and cause structural damage to any manmade structures and to aquifers. Such accidents can be prevented by reinjecting unwanted fluids through injection wells as illustrated in Figure 4.

The diesel generators used in drilling the well would cause some air pollution in the form of exhaust emissions. The greatest threat to air quality lies in the event of a blowout. Although blowout preventers are an integral part of the drilling rig, for every 5,000 wells drilled one suffers a blowout. The blowout may discharge natural gasses into the atmosphere. These may be odorous or toxic, or both, such as hydrogen sulfide, which smells like rotten eggs. These pollutants may be sprayed hundreds of feet into the air and in strong winds, can be carried for distances of more than a mile. A blowout can result in a fire when highly volatile hydrocarbons are ignited by contact with hot engine manifolds or sparks from engine exhausts. The fire may burn for days or weeks before it can be extinguished, emitting smoke and the products of hydrocarbon combustion into the atmosphere. But the greatest impact of a well fire is the safety hazard to construction crews and other people who may be nearby.

Fluids produced during the drilling (oil, brine, and the chemicals added to the drilling mud) can damage water, soil and vegetation. These toxic solutions can kill vegetation by direct contact or indirectly by making the soil sterile and unhabitable for plants. If the fluids escape and enter the watershed, dependent fauna and wildlife would also be jeopardized by the contaminated water.

Some ground water aquifers may be penetrated by the exploratory drilling. If the wells are not properly cased, according to both federal and state regulations, brines could contaminate ground water supplies. Effects of ground water contamination may be difficult to detect if the aquifer intersected a stream a long distance away or if a ground water pumping well were far from the producing well. The potential for future use of an extensive but undeveloped aquifer could be reduced.

The 20 to 25 men needed in the exploratory phase of drilling will probably reside at local motels and trailer parks for the 2 to 3 months period of exploration. The presence of these comparatively well-paid employees would create an added income for the local merchants, but would place a burden on the community for goods and services.

Exploratory wells would have minor impacts on most animal species and habitat because of the small area involved. The biggest impact would involve the temporary displacement of most species of wildlife. Rodents inhabiting this small area could perish if displaced. Clearing of vegetation, road construction, and human activity and noise are important factors that would lower the quality of wildlife habitat on the exploratory well sites. Improper construction methods may cause erosional problems that would result in the deterioration of water quality and loss of fish and wildlife habitat. During exploratory drilling for oil, saline and hot water may be brought to the surface. If not contained properly, these pollutants could kill the aquatic life and habitat as well as other species. Containment of these pollutants in mud pits may entrap some species and the drilling mud additives may prove toxic to the wildlife that may drink from it. The U. S. Fish and Wildlife Service have raised the same concerns (Appendix K). In addition, they expressed some concern of the impact on the migratory birds from the Malheur Wildlife Refuge. However, U. S. Fish and Wildlife Service, Division of Ecological Services in Burns have indicated that the lease area is not an important part of the waterfowl migration route. Songbirds and other birds could be killed by flying into the drilling rig. The Oregon Department of Fish and Wildlife have indicated that the exploration phase would have minimal impacts on wildlife and wildlife habitat (Appendix K). They recommended, however, that the operations be restricted to late spring to early fall in the mule deer winter range (Figure 9) to prevent harrassment of wintering mule deer.

Development

Many of the circumstances described in the exploration section are also true for the development phase, but the impacts become proportionately greater. Because there are many more wells drilled, roads and pipelines constructed and storage facilities built, there are many more chances for blowouts, leaks and spills. Soil erosion, vegetation destruction, air and water pollution and other impacts described in the previous section would occur on a larger scale. Because the area involved in the developmental stage is much greater, additional factors must be considered, such as conflicts with traditional land uses. Depending upon the circumstances, and Environmental Impact Statement may be required at this stage.

Residential, commercial, and industrial areas adjacent to an oil and gas field would experience disruptive changes. The possibility of accidents such as fires, blowouts and subsidence are safety hazards. Oil and gas activities would also produce noise, odors, and visual instrusions in developed areas.

This phase of operations would also affect recreational uses and values. Construction of facilities would change the appearance and character of the land. Where development occurred, land would be removed from recreation use. Public access to operating fields, unless closely supervised, could be denied because of the possibilities of injuries and vandalism. Recreational uses that depend on motorized travel, such as fishing, hunting and rockhounding could benefit because of improved access. The resources, however, could be adversely impacted by increased people pressure, for instance, big game populations might be reduced by poaching as a consequence of improved access.

Space and facilities required for oil and gas development and extraction could eliminate some forest lands from production, place constraints on timber harvest during development, and ultimately limit forest regeneration following abandonment. Conversely, in isolated areas, roads built for oil and gas development could possibly be used for timber management and harvest.

Because of the size of the area that might be involved in this developmental stage, the potential adverse effect on wildlife also becomes greater. The encroachment of oil and gas development on the habitat of deer, elk, antelope, small mammals and raptorial birds might force them to migrate to other areas. The greatest hazard comes from harassment during crucial periods of nesting, wintering and breeding. Animal populations displaced from an area can be eventually replaced from surrounding ranges provided the habitat remains intact. Destruction of the habitat might preclude repolulation for extended periods. There have been instances of wildlife migrating out of an oil and gas field but eventually becoming accustomed to the disruptions and moving back. Unless proper precautions were taken, both mammals and birds may be poisoned by watering from the mud pits or streams contaminated by leaks and spills that may contain toxic fluids. Mud pits might also trap some animals. Leaks, spills, and soil erosion could threaten fisheries in streams and reservoirs. The impact on livestock may also be significant if the operations are conducted during the normal grazing season. Like some forms of wildlife, livestock have a low tolerance for noise and may avoid it by vacating the area.

The greatest potential for impact is on the human environment. Although in this report the developmental and production stages are being considered separately, they would occur simultaneously as the developmental stage progresses. Production requires many more workers depending on the size of the field being developed. The story of Farmington, New Mexico, shows how an oil and gas development may affect a small rural area. Although the area of the oil and gas field, the San Juan Basin, is 10 times the size of what could be expected in Harney County, the overall effects could be similar.

Farmington, lying in the center of New Mexico's San Juan Basin, was based on a stable rural economy (ranching, farming, forestry). Then came the discovery of oil and gas and its associated influx of people. The town grew from 3,573 in 1950 to 30,000 before 1960. The population density of the county increased from 3 to 10 persons per square mile. The numbers of residences increased from 700 in 1950 to 7,535 in 1959. By 1955, one billion dollars had been invested in oil and gas within the county. Several oil and gas companies and service industries set up offices in Farmington; four gasoline and two oil refineries were constructed. Although the oil reserves are gradually being depleted and less manpower is needed, the area does have coal and natural gas resources to sustain the economy of the region. The Farmington example illustrates the rapid growth associated with an oil and gas development.

The situation could be similar in the Burns-Hines area depending on the extent of oil and gas field and the rate of development. Regardless of the life span of an oil and gas field, which may be from 10 to 50 years, initial discovery and development results in a large influx of people and expenditures of large amounts of capital.

Like Farmington, Burns-Hines is based on a stable rural economy. Sudden growth from such development could alter local social and political systems, values, and lifestyles. As mentioned in the section on attitudes and expectations, Harney County residents place a high value on an established, stable, historically traditional lifestyle. These local residents also probably would not derive direct economic benefit from oil and gas development. Drilling, development, production and construction require a semi-skilled labor force not locally available. The introduction of an imported labor force composed of people from different backgrounds, sub-culture or lifestyles, might cause some tension.

It is estimated that local labor is used for 10 to 15 percent of the field crew employment. It is also normal for companies to retain these local employees during development and train them for production phases. Service and trade sectors of the local economy immediately inflate, creating secondary employment in the wholesale and retail trade. Thus, an oil and gas development would have a beneficial effect on local employment, particularly in an area of high unemployment. But the opportunities generally cease once the field is abandoned.

The influx of money and new inhabitants could improve the economic level and cultural amenities of the community. New homes, hospitals, schools, churches, etc., might be built. New culture horizons might be introduced by the influx of "outsiders" who bring in new philosophies, interests, and organizations, and may demand theatres and museums. These benefits would remain long after the oil boom is over.

Discovery and development would put a burden on local government's ability to finance public services. Police and fire protection, medical facilities, and municipal sewer and water systems might be overloaded. Very typically, sufficient additional services are not provided fast enough and the quality of services for all may suffer initially.

When an oil and gas field is abandoned and if the economic base is not diversified some out-migration can be expected. When local governments have provided services and facilities to meet demands during the development and production phases, there is a possibility that they have over-anticipated long range needs of the community. Greatest impact would take place when (1) substantial out-migration takes place and (2) local governments are indebted to pay for facilities no longer needed.

Development of an oil and gas field would introduce a land use that is locally intensive; population influx and economic activity creates a demand for residential and commercial land uses. Effective local comprehensive land use planning can guide these uses in an orderly and controlled manner.

One beneficial effect of oil and gas production is that a portion of the royalties and rents received from the operation go to the state. The Federal government return 37.5 percent of the bonuses, rents, and royalties received from Federal oil and gas leases to the state; and the state allocates the money to the counties from which the revenue was derived.

Many of these impacts would occur during the developmental phase and early production phase of the operation. Both beneficial and adverse effects can be expected, but with proper planning some of the adverse effects may be allayed.

Production

Much of this phase involves construction of facilities like those illustrated in Fugure 4; roads, pipelines and wellhead equipment are also built. As previously mentioned, the impacts associated with these construction activities are noise, air pollution, soil erosion, vegetation destruction, and possible decrease in water quality.

Newly constructed facilities would also create a visual impact on the area, especially when they are located on skylines or in open, treeless areas.

With the additional wellhead equipment, pipelines, and storage facilities, the chances of spills or leaks become greater. More wildlife habitat, open space, recreational, and timber and/or grazing lands would be affected.

Abandonment

This phase has the least impact upon the natural environment, but may have the most impact on the human environment. Unless the economic base is diverse enough so that people can find other jobs when the oil and gas reserves are depleted, there would be a substantial decrease in population. The additional revenues and tax base would be lost. All of these factors have been discussed in detail previously.

It might not be possible to reclaim the disturbed sites and restore them to their original condition. Erosion rates might be greater than they were before disturbance. If the mud pits were not properly reclaimed, they might be breached after field abandonment, or escaping fluids could lead to soil erosion and soil sterility. If wells were not cased and plugged properly the leaks could destroy additional habitat.

All of the facilities must be removed before abandonment. Because of the extra vehicle traffic, the soil would become compacted and possibly eroded, vegetation would be destroyed, and if the operation is during the summer months, dust would be a problem.

If the sites are not revegetated properly, soil erosion would occur and water quality would decrease because of the increase in sediment load. Regegetation of forest lands taken out of production for oil and gas development can be difficult, especially on south slopes. In effect these forest lands may be taken permanently out of production even with attempted rehabilitation.

Possible Mitigating Measures

Introduction

A tract of land is not offered for oil and gas leasing unless the environmental analysis indicates that the anticipated impacts as identified in the previous section, can be mitigated. The following section is a description of the methods that could be employed to reduce or alleviate those anticipated impacts.

Preliminary Investigation

During a preliminary investigation, some dust would be created that may be alleviated by: (1) requiring operators to use existing roads whenever feasible, (2) permitting construction of roads of minimum width only when absolutely necessary, and (3) close and revegetate roads not needed after investigations are completed.

Exploration and Development

These two phases of an oil and gas operation should be considered collectively in this portion of the analysis because the impacts associated with these two phases are similar, although the degree of impact is greater in the development phase. Thus, the possible mitigating measures for the exploration phase are also applicable in the development phase.

Construction of access roads and clearing of drilling sites could have a detrimental effect on soils and vegetation. Existing roads could be used as much as possible, new roads could be built only when necessary, and when they are built, culverts, perforated pipes and water bars could be installed to control drainage. Vegetation buffers could be required when roads are constructed near stream banks. If roads are to be used all year, the roads could be surfaced. These construction methods would also eliminate soil erosion and stream siltation. By limiting the number and dimensions of roads and drill sites, soil compaction and vegetation destruction would be minimized.

Cultural resource values would be directly impacted by any surface disturbance. Our knowledge of the cultural resource values in the lease area is incomplete. To alleviate the inadvertent destruction of the unknown cultural resources of the area, the lessee could be required to hire a certified archeologist to survey the area prior to surface disturbance. The purpose of the survey would be to disclose the existence of antiquities and other objects of interest.

In order to prevent land subsidence and possible structural damage, the fluids withdrawn during the drilling operation could be monitored and fluids reinjected when necessary.

To reduce the chances of a blowout, which results in a degradation of air quality, blowout preventers could be used. In addition, contingency plans could be developed in the event that a blowout and/or fire may occur.

Many types of fluids are produced or used during drilling that may damage the water, soil and vegetation. Measures to alleviate such damage include: (1) adequate well casing, (2) preventing blowouts, (3) locating wells away from streams, lakes, etc., (4) proper containment and reinjection of saline water into the producing formations, (5) proper construction of drilling mud pits, and (6) adequately sealing wells during abandonment. In some sensitive areas, secondary dikes could be constructed around drilling sites to contain any toxic fluids in case of a blowout. Wells could be cased and properly sealed to prevent contamination of ground water aquifers.

Land use conflicts can be best resolved by comprehensive local and regional land use planning and the adoption of effective land use controls before leasing takes place. To alleviate the impact on the communities, advance information as to the development possibilities would allow local officials the lead time to plan for increased community development in case oil and gas development becomes a reality. Economic instability could be alleviated somewhat by local officials understanding the uncertainty and finite nature of an oil and gas development. Some of the more traditional land uses in the area, such as livestock grazing and industrial forest management can reasonably coexist with oil and gas operations. Impacts on these land uses can be mitigated by employing the erosion control and water quality protection measures previously discussed.

Many of these erosion control and water quality protection measures could also reduce the adverse impacts on wildlife. In order to protect wildlife values, operations could be curtailed during the crucial periods of resting, wintering and breeding. Fences could be built around mud pits to prevent animals from falling in.

Production

Many of the construction methods and preventive measures previously discussed are also applicable to the production phase. However, additional measures need to be considered.

Holding tanks and other storage areas could be surrounded by impermeable dikes and berms to catch oil in the event of a blowout. Spilled oil from storage areas and pipelines could be cleaned up immediately to reduce the possibility of water pollution.

Careful planning of roads, pipelines and storage areas would eliminate unnecessary roads, reduce soil disturbance and visual impacts.

To further reduce visual impacts, pipelines, storage tanks, etc., could be painted in order to be more harmonious with the surrounding landscape.

Abandonment

During abandonment of a field, drilling pads, well sites, storage sites, roads, etc., could be ripped and revegetated as soon as oil structures are removed. If any area shows evidence of soil compaction, the area could be ripped and revegetated. Reclamation of abandoned well sites and producing fields could include revegetation of disturbed areas with plant and grass species beneficial to wildlife. Mud pits could be allowed to dry before the pit is filled in and graded to as near the original surface as possible and replanted. Abandoned wells could be sealed as required by the U. S. Geological Survey and the State of Oregon Regulations.

Recommended Mitigating Measures

If the oil and gas leases are issued, the lessee must operate under the "Federal Oil and Gas Leasing Procedures" (Appendix E). The oil and gas lease must also comply with the requirements of the Environmental Protection Agency (EPA) for oil pollution prevention (Appendix F).

All oil and gas leases contain a provision for protection of the environment (Appendix G). The lessee, upon signing the lease, shall agree to the following stipulations for all Federal lands, both National Forest and National Resource lands, within the lease area:

1. Activities employing wheeled or tracked vehicles shall be conducted in a manner suitable to the Authorized Officer and the Supervisor so as to miminimize surface damage. Existing roads and trails shall be used whenever possible.

2. Operations within 600 feet of any surface waters or wet soil areas such as streams, springs, seeps, reservoirs or meadows, will be permitted only if specifically approved in writing by the Authorized Officer and the Supervisor.

3. Backfilling, final grading, revegetation and removal of surface supporting facilities shall be completed within one year after completion or termination of the particular operation involved, unless the Authorized Officer extends such time.

4. The Lessee shall construct and color all permanent installations in such a manner that they are harmonious and accentuating to the surrounding landscape.

5. Restricted access will be provided by the Lessee when specifically requested by the Authorized Officer and the Supervisor.

6. Prior to any operations under this lease, the Lessee will engage a qualified archeologist, acceptable to the Authorized Officer, to make an archeological survey of the land to be distrubed or occupied. A certified statement, signed by the qualified archeologist, setting out the steps taken in the survey and the findings thereof as to the existence of antiquities or other objects of historic or scientific interest, shall be submitted to the Authorized Officer. If the statement indicates the existence of such objects, which might be disturbed by operations under this lease, the Lessee shall take such steps as may be required by the Authorized Officer, including archeological salvage. The responsibility for the cost for the certificate, survey and salvage will be borne by the Lessee, and such salvage property shall remain the property of the Lessor or the surface owner.

   The Lessee shall immediately bring to the attention of the Authorized Officer any antiquities or other objects of historic or scientific value or interest, including but not limited to historic or prehistoric ruins, fossils or artifacts discovered as a result of operations under this lease and shall leave such discoveries intact. Failure to comply with any of the terms and conditions imposed by the Authorized Officer with regard to the preservation of antiquities may constitute a violation of the Antiquities Act (16 U.S.C. 431-433).

7. The Lessee shall contact the Authorized Officer prior to development of a plan of operation to be apprised of practices that should be followed or avoided in exploration or field development, including but not limited to such matters as road standards, road crossings, gates, cattleguards, fencing, erosion control, surface rehabilitation, reservoirs, wells and springs.

8. On deer winter range (Figure 8), exploration and development operations, such as drilling and associated activities, will not be allowed, except from May 1 to October 1, unless specifically approved by the Authorized Officer and the Supervisor in writing.

9. For lands under the management of the Forest Service, Lessee will also agree to comply with those additional stipulations found in Appendix G. For lands under the jurisdiction of the Bureau of Land Management, the Lessee will agree to comply with the following additional stipulations:

   The Lessee will apply to the Authorized Officer for a tramroad right-of-way permit pursuant to 43 CFR 2811, over lands and roads owned or controlled by the BLM for the purpose of obtaining access to the leased area.

   All access, haul and other support roads and trails shall be located, constructed and maintained in accordance with Bureau standards and specifications as required by the Authorized Officer. Roads constructed in rocky, highly erosive areas shall be constructed by placing the road base on top of the rocks.

In addition to these stipulations, all oil and gas leases issued contain an open ended set of stipulations (Appendix H). This form insures that after the lease is ussued, the U. S. Geological Survey, the U. S. Forest Service and the Bureau of Land Management have additional opportunities to specify measures the lessee must take to protect environmental values during any of the four phases of the operation.

The State of Oregon also has jurisdiction over an oil and gas operation on Federal lands. The lessee must comply with the Department of Geology and Mineral Industries Regulations (Appendix I). If a lessee desires to drill and exploration well, he must also apply for a permit with the Department of Geology and Mineral Industries as well as the U. S. Geological Survey. The Department of Environmental Quality and the Department of Geology and Mineral Industries have agreed to 12 conditions (Appendix J) that may be made part of a state drilling permit.

Residual Impacts

The oil and gas operating regulations, lease provisions, land use planning, permit reviews and other rules and regulations are designed to assure that oil and gas operations are conducted in an environmentally acceptable manner. In those instances where this cannot be done, development and use will not be permitted. Where the benefits of a proposed action outweigh acceptance of minor adverse impacts, such uses are acceptable provided the impacts have been identified and mitigated as much as possible. The following summarizes the type of adverse impacts that are unavoidable should the leases be issued and the operations go to completion.

One of the major impacts resulting from the proposed action that could not be avoided is the impact on the local communities. Even with land use planning and local community involvement, the local communities would be affected if the development phase were reached. A possible burden could be placed on community services to provide housing, schools, water and sewage facilities and health services depending on the size of the field and the rate of development. If the local economy did not diversify before the oil and gas field is abandoned, the impact would be even greater. However, the local communities would also derive some benefits from oil and gas development like new schools, roads and hospital facilities.

Another major impact that is unavoidable is changing the character of the land from its present use to industrial use. Some of the visual impacts can be lessened by burying pipelines, painting structures a more harmonious color, etc. Nonetheless, man's activities will lessen the area's aesthetic values.

Like any construction activity, some noise, dust and engine exhausts cannot be avoided. Because of the noise and intrusion of activity, some wildlife will be displaced. Recreational activities will also be displaced because of the potential safety hazards.

Most of these residual impacts are temporaty; they will last only as long as the oil and gas field is producing. Once the field is abandoned and the area is restored to its original character as much as possible, the impacts will be eliminated. The only impact that cannot be eliminated once the operations have ceased is the impact on the county and local communities. The changes brought about by oil and gas development on the local communities will be permanent.

RELATIONSHIP BETWEEN SHORT-TERM USE AND LONG-TERM PRODUCTIVITY

Introduction

This section focuses on the relationship between the short-term use of the environment for oil and gas operations and the long-term productivity and maintenance of the environment for other uses such as wildlife, recreation and grazing.

Short-term use refers to the period during which oil and gas operations would take place. The duration may vary from a period of several months, if wildcat drilling were unsuccessful, to 50 years if commercial amounts of oil and gas were discovered. Long-term use includes the period following all possible restoration, after the abandonment of the oil and gas lease.

General

Leasing lands for oil and gas development involves the commitment of oil and gas resources and resources of the site(s) involved. Some uses such as timber harvesting and grazing can co-exist with most oil and gas operations.

The purposes of the exploration and testing phases of oil and gas leasing are to determine the nature and extent of oil and gas resources. The active portion of this phase is short, sometimes lasting for only days or months. It may be intensive and continuous for a short time. When exploration proves unsuccessful, there will not be subsequent use of the land for development and production of oil and gas. Such leases will terminate at the end of the 10 year primary term, or in many instances, be relinquished at an earlier date so the company can avoid additional lease payment costs. Exploration and lease provisions will require that lands disturbed by unsuccessful exploration will be restored as nearly as possible to their original condition. Restoration includes measures such as grading, installing proper drainage, soil stabilization, revegetation, disposal of all wastes, filling of holding ponds, etc. Except for scars from roads or other earth movement, the areas should soon return to natural conditions. Changes in vegetative cover may result, depending upon whether native or nonnative plants are used. Generally, the native vegetation will eventually re-establish, but on some sites recovery may be slow.

If exploration reveals oil and gas in commercial quantities, development and production will begin. But before this occurs, an Environmental Impact Statement may be necessary. The life of the field is generally from 10 to 50 years. When the reservoir can no longer sustain the field, the facilities will be dismantled, the land restored to its original condition as far as possible. and the leases terminated. Most of the area involved will by then have become well stabilized except for sites used for storage and collection, roads or other structures or facilities. Disturbance from revomal of these improvements will be of temporary nature and subject to restoration. The combination of restoration and natural vegetative recovery will, over time, result in a near natural setting, with only some contour change as evidence of prior uses. The lands will return to their former productivity or will be available for other appropriate uses.

Oil and Gas Resources

By developing oil and gas reserves, a previously untapped resource could be utilized to meet the nations's energy demand. The contribution would be small in terms of total energy requirement,s but could be important on a regional or local basis.

Water

Water is used for drilling in such small amounts that it would not jeopardize local water supplies. Under the proposed controls and stipulations for waste water disposal, degradation of surface waters and ground water aquifers would not be significant in the long-term mishaps and accidents may have serious short-term impacts, but corrective measures should prevent long-term adverse effects on the water resource.

Land

Land uses during the period of operations would change from wildlife habitat, recreation, etc., to industrial operations. Some prior uses, although they may be reduced, are compatible with development and production. Public access would be restricted to protect the public and facilities. Development and production activities are not expected to have any lasting or inhibiting effects on the use of the land after geothermal operations have ended and the facilities have been removed.

Wildlife and Recreation

Development of oil and gas may cause localized adverse impacts on wildlife by displacement of wildlife and altering the habitat. Restrictions of public access will reduce hunting and related recreational opportunities in the vicinity of installations.

Economic and Social

Oil and gas development, including drilling wells and constructing roads, pipelines, and storage facilities, requires substantial capital investment. Such investments create an increased tax base for the development area. However, the labor-intensive phase may be short-term and would result in significant changes in population distribution, economic structure and social character, but if the economic base is diversified before abandonment begins, the impacts will be short-term.

Irreversible and Irretrievable Commitments

The principal commitment is the non-renewable oil and gas resource. Other irreversible and irretrievable commitments of resources that may occur as a result of development are:

1. The removal of oil, gas and brines can cause land subsidence.
2. Roads and plant sites may not be returned to their original conditions.
3. Eroded soils cannot be replaced.
4. Plants which may be removed may not be replaced by the original species.
5. Archeological sites are a fragile resource. If a site is disturbed or destroyed, the scientific information it could have yielded cannot be replaced.

PERSONS, GROUPS AND GOVERNMENT AGENCIES CONSULTED

Appendix K is a list of people and agencies consulted on the proposed action and the Environmental analysis Report.

INTENSITY OF PUBLIC INTEREST

Letters were sent to interested parties (Appendix K) and a news release was printed in the Burns-Times Herald (Appendix K). From the letters we received, the interest can be described as "concerned" to "disinterested" (Appendix K).

Some groups are concerned with the conflicts that might arise as a result of the proposed action. Others stated that the effects of the proposed action would be acceptable. Of the many letters sent, only a small number responded, indicating a lack of interest.

On February 19, 1976, a program depicting an oil and gas operation was shown to 10 persons of the local Kiwanis Club in Burns, Oregon. The comments received from this local service group of professional people, businessmen and local government officials were generally favorable. They considered visual impact and surface disturbance as being so limited in a real extent to be insignificant. Another person commented that if the operation was conducted properly, it would be fine, but if not, as he had observed in some of his past experiences, then he would rather not have oil and gas leasing.

PARTICIPATING STAFF

The Environmental Analysis Report was prepared in the Burns District, Bureau of Land Management and the Snow Mountain District, U. S. Forest Service by:

Chad Bacon, Riley Area Manager, BLM
Guy Sheeter, Wildlife Biologist, BLM
Jim Scheidt, Soils Scientist, BLM

Ruth McGilvra, Archeologist, BLM
Dick Miller, Realty Specialist, BLM
Caryn Talbot, Editor, BLM
Bob Pulfrey, Geologist, BLM
Lew Maher, Range and Wildlife Specialist, USFS
Rick Hall, USFS

SUMMARY CONCLUSIONS

The dominating factors reflected in the analysis are summarized in the following paragraphs.

With adherence to the recommended mitigating measures, rules and regulations, no major environmental impacts are anticipated from the proposed action. However, if there is insufficient planning and coordination, the impact on the local communities could be significant.

Although the probability of accidents in an oil and gas operation are remote, the potential environmental impacts resulting from oil spills, well blowouts, land subsidence, fires, and well casing leaks can be considered significant.

As statistics have shown, it is unlikely that the operation will go beyond the exploration phase. The lands affected by the exploration effort will be restored to the original state as much as possible. Thus, the proposed action of the leasing of lands for oil and gas will have little impact on the long-term productivity.

If exploration is successful and development occurs, a much needed resource would be provided. At the same time, the development could have both substantial benefits and adverse effects on the local communities.

The principal irretrievable commitment of resources would be the depletion of oil and gas. Once the oil and gas has been depleted, the area would be restored, as nearly as possible, to the natural condition.

The public reaction to the proposed oil and gas leasing can be described as concerned, disinterested, or supportive. It is anticipated that further public interest will be generated with the publication of this document.

APPENDIX A

STATEWIDE OVERVIEW OF POSSIBLE OIL AND GAS DEVELOPMENT ON FEDERAL LAND IN OREGON

STATEWIDE OVERVIEW OF POSSIBLE DEVELOPMENT ON FEDERAL OIL AND GAS LEASES IN OREGON

Introduction

This appendix is an overview of the development which could occur on Federal oil and gas leases in Oregon. The number and location of leases and pending applications in the State are described; and the possible levels of ensuing oil and gas exploration and production activities are considered.

The anticipated environmental effects of exploration and production activities are analyzed in the main body of environmental analysis records prepared for individual blocks of lease applications.

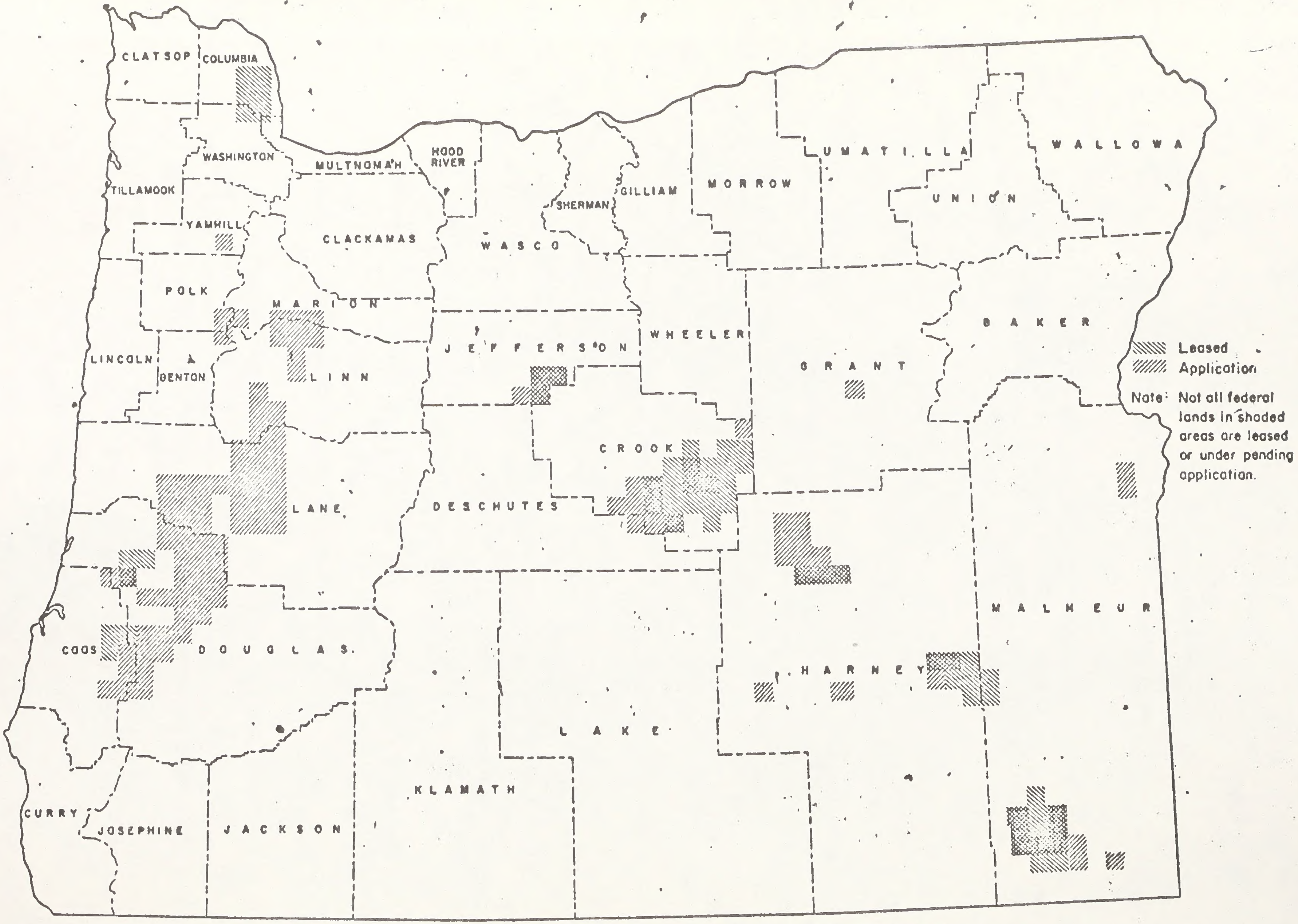
If commercial quantities of oil or gas are found in the State, transportation facilities would be required; and discoveries of oil could lead to the construction or enlargement of refineries. Analysis of the environmental effects of transportation and refining facilities is beyond the scope of the environmental analyses of the lease applications. However, the potential for, and possible magnitude of, pipeline and refinery construction are examined in this appendix. The principal environmental permit and certification processes required of proposed pipeline and refinery projects in Oregon are also described.

As of February 9, 1976, 212 applications for Federal oil and gas leases were on file in Oregon. The applications covered 387,636 acres. In addition, 193,467 acres were already under lease. The total area included in both existing leases and pending applications was 581,103 acres. Areas containing Federal leases and pending lease applications in Oregon are shown in Figure 1.

Exploratory Drilling

If pending lease applications were approved, at least four or five exploratory wells probably would be drilled on Federal or intermingled private or State land during the next several years. If early tests were favorable, 20 or more wildcat wells might be drilled on lease blocks containing Federal lands.

Many Federal oil and gas leases expire without being explored for oil and gas. This is particularly true outside areas classified by the U.S. Geological Survey as known geologic structures. Since there are no known geologic structures in Oregon, exploratory oil and gas wells probably would be drilled on a relatively small percentage of the leases during the next several years. If oil or gas were discovered, additional exploratory wells would be drilled.



Note: Not all federal lands in shaded areas are leased or under pending application.

FIGURE 1 Areas containing Federal Oil and Gas Leases and Pending Application for Federal Oil and Gas Leases in Oregon, as of February 9, 1976.

The petroleum industry's interest in exploration for oil and gas in Oregon has fluctuated over the years, but it now appears to be increasing. One indication of industry interest in the State is the acreage of Federal oil and gas leases. The total area included in Federal leases in Oregon dropped from a peak of 1,079,740 acres in 1956 to 22,892 acres in 1967. Since 1967, the acreage leased or under application has risen steadily; in early 1976, it stood at 581,103 acres. Oil companies also were reported to be leasing substantial areas of private land in 1975 and early 1976, particularly in the Willamette Valley.

Exploration activities increased in the State in 1975, and it appears that the momentum will extend at least through the next two to three years. Mobil Oil, the major applicant for Federal leases in western Oregon, conducted geophysical and geochemical sampling surveys in the State. Reichold Energy Corporation and Northwest Natural Gas Company drilled four dry holes in western Oregon in 1975 in search of natural gas.

The number and location of lease and lease application blocks provide a general indication of the number and location of exploratory wells which might be drilled during the next several years. Identification of lease blocks in some areas is complicated by the intermingling of leaseholds and lease applications of two or more companies. However, there appear to be about 15 lease or lease application blocks on Federal lands in the State at the present time.

If the first well drilled in a lease block is unsuccessful, it might be the only well drilled in the block during the current cycle of exploratory activity. Many years may pass before the current or a succeeding lessee concludes that another well is warranted. Wells might not be drilled in some blocks if exploration of nearby blocks is unsuccessful. Other blocks might remain unexplored because of the inability of the lessee to secure financing for a drilling operation. In a large block held by a large company, two or more dry holes might be drilled before drilling operations are stopped.

Almost all of the pending lease applications for Federal lands in western Oregon were filed by Mobil Oil; and if a significant portion of the applications is approved, it is likely that more than one exploratory well will be drilled in the company's large lease block. A petroleum engineer for the Oregon Department of Geology and Mineral Industries believes that the company is planning to drill several deep test holes in the next two to three years. (1)

Approximately one acre is required for the drill pad for an exploratory well. Somewhat more land would be needed on sloping land. On a well-per-well basis, more land might be disturbed in the construction of drill pads in western than in eastern Oregon. Because of the road system already developed to harvest timber and the cost of road construction in steep terrain, most wildcat wells in western Oregon probably would be drilled in locations which minimize the need for temporary access roads. In eastern Oregon, wildcat wells would be more likely to require the construction of access roads.

Oil and Gas Production

Recent experience of the oil and gas industry in the United States may provide a general indication of the possible outcome of oil and gas exploration in Oregon. As indicated in Table 1, the chances of discovering a significant recoverable reserve of oil or gas in the nation in 1974 were approximately 1 in every 59 new-field wildcat wells drilled. When a significant discovery was made in 1974, the odds were greater than 9 to 1 that the area of the field would be less than 2 square miles.

TABLE 1

NEW-FIELD WILDCAT WELLS DRILLED IN U.S. IN 1974: NUMBER AND PERCENT OF DRY HOLES AND PRODUCERS BY CLASS OF OIL AND GAS FIELD

Class of Field 3/	Total Recoverable 3/ Reserves by Field Class		Area of Oil Fields 1/		Number and Percent of 2/ New-Field Wildcats Drilled in 1974, by Field Class	
	Oil (Mill. Brls.)	Gas (Bill. Cu. Ft.)	Denver-Julesburg Basin. Co. (Sq. Mi.)	California (Sq. Mi.)	Number	Percent
I. Producers					805	14.24
A. Significant					(96)	(1.70)
A	+50	+300	--	--	0	0
B	25-50	150-300	9.7	1.7	1	0.02
C	10-25	60-150	5.2	1.1	7	0.12
D	1-10	6-60	1.4	0.4	88	1.56
B. Not Significant						
E	Less than 1	Less than 6	0.6	0.2	707	12.51
F	Abandoned				2	0.3
II. Dry Holes					4847	85.76
Total New-Field Wildcats Drilled in U.S. in 1974					5652	100.00

1/ H. W. Menard and G. Sharmen. 1975. "Scientific Uses of Random Drilling Models." Science. Vol. 190, No. 4212.

2/ F. J. Wagner, 1975. "North American Drilling Activity in 1974." Bulletin of the American Association of Petroleum Geologists. Vol. 58, 1273.

3/ Field classifications and "significance" criteria established by American Association of Petroleum Geologists.

All of the 189 oil and gas wells drilled in Oregon since 1902 have been dry holes. In the opinion of the staff of the Oregon Department of Geology and Mineral Industries, however, "There is still potential for finding deposits of oil and gas in Oregon in spite of many past drilling failures . . . . Results of deep drilling have been generally discouraging, but they have shown that there is a thick section of marine sedimentary rocks and that at many locations porous and permeable sands exist within the stratigraphic section." (2) Past drilling in the State has produced numerous shows of oil and gas, but none has been in commercial quantities.

One indication of the chances of discovering commercial quantities of oil and gas in Oregon may be the discovery rate for all new-field wildcat wells in the country. As indicated in Table 1, of the 5652 new-field wildcat wells drilled in the United States in 1974, 805--or one in seven--were finished as producers. However, only 96--or one in 59--resulted in the discovery of fields with significant recoverable reserves.(3) The American Association of Petroleum Geologists considers significant reserves to be those over one million barrels, the amount required to meet the country's petroleum demand for one and one-half hours. The percentage of significant oil or gas finds in total new-field wildcat wells drilled in the United States declined from over three percent in the late 1940's to 1.7 percent in 1974.(4)

Recent drilling experience also provides an indication of the size of field most likely to be discovered. Over the years, a growing percentage of the significant discoveries has been in smaller fields. In the late 1940's, 20 to 25 percent of the significant oil and gas discoveries were in Class "D" fields, the smallest fields in the American Association of Petroleum Geologists' rankings.(5) As indicated in Table 1, 88 of the 96 significant new-field discoveries in 1974, or 92 percent, were in Class "D" fields. From 1968 to 1974, 84 percent of the signficant discoveries were in Class "D" fields.

Table 1 also relates classes of oil and gas fields, as determined by total recoverable reserves, to the area of oil fields in Colorado and California. Class "D" fields average approximately one-half square mile in California and one and one-half square miles in the Denver-Julesburg Basin in Colorado. The average sizes of the fields in each class in the Denver-Julesburg Basin approximate those for the nation as a whole.(6)

It appears, therefore, that if oil or gas is found in Oregon, the chances are better than even that the field will be less than two square miles in size.

The American Association of Petroleum Geologists refers to Class "A" oil and gas fields as "giants." From 1968 to 1974, only 3.1 percent of the significant discoveries in the United States was in giant fields. No giant fields were discovered in the country in 1973 and 1974 (1975 data are not available).(7) Although the chances of a giant field being discovered in Oregon are probably slight, the possibility remains. Examples of large oil fields in California include the 46-square mile Midway Sunset and 60-square mile Elk Hills fields. The Rio Vista and Sutter Buttes fields are large gas fields in California; both are approximately one square township, or 36 square miles, in area.(8)

The amount of land used in a field for roads, well sites, and other oil and gas field facilities depends largely upon the well spacing pattern. Gas wells tend to be more widely spaced than oil wells. Typical spacing patterns in recently developed fields in California are 10 acres per well in oil fields and 160 acres per well in gas fields.(9) In the Rocky Mountain area, spacing patterns range from 40 to 160 acres per well in most oil fields developed in recent years and from 160 to 640 acres per well in gas fields.(10)

The administrative rules of the Oregon Department of Geology and Mineral Industries require a minimum spacing pattern of 40 acres per well unless a different spacing pattern is approved by the department's governing board.

With a 40-acre-per-well spacing pattern, approximately 12.8 acres per square mile may be used for well sites, roads, and other facilities; with a 320-acre-per-well spacing pattern, about 6.4 acres per square mile may be used.

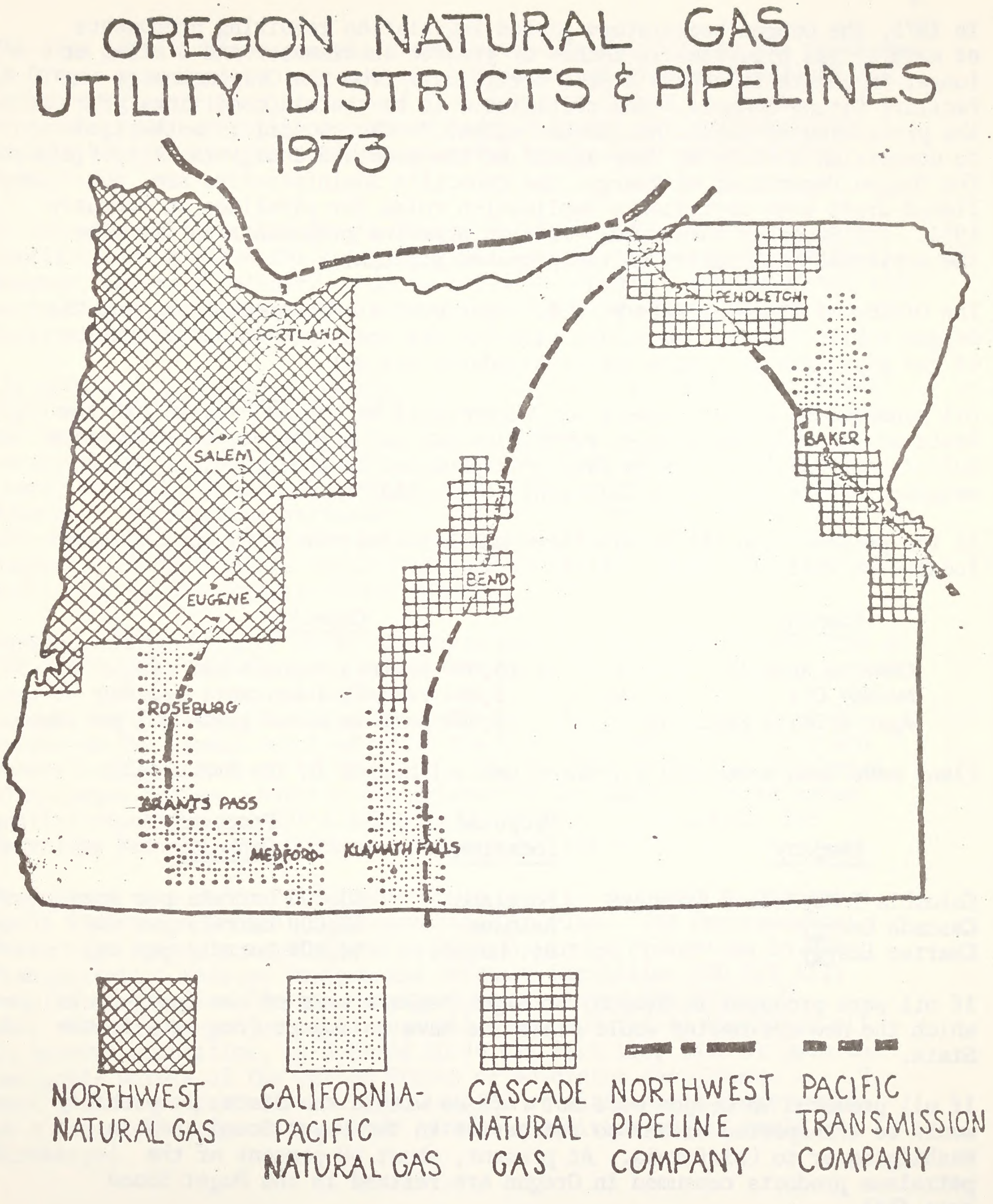
If a small, two-square mile field is discovered in Oregon, the amount of land used in the field may range from approximately 13 to more than 25 acres. If a large, 50-square mile field is discovered, more than 640 acres may be used for roads, well sites, and other facilities.

Transportation and Refining Facilities

If commercial quantities of natural gas were discovered in Oregon, it probably would be sold to natural gas utilities with marketing areas or pipelines in the vicinity of the gas fields. The boundaries of Oregon's natural gas utility districts and major pipeline routes are shown in Figure 2. (The West Coast leg of the proposed Alaska Natural Gas Transportation System natural gas pipeline would parallel all but 21.4 miles of the existing Pacific Gas Transmission Company route shown on the map). Except for those in southeastern Oregon, the lease and lease application blocks are located within a relatively short distance of major existing natural gas pipelines.

If the route of a proposed gas pipeline crossed Federal lands, the land-administering agency would prepare an environmental assessment or analysis record before issuing a right-of-way. (The environmental impacts of flow-lines--as distinct from pipelines--constructed on the leasehold to carry gas from the wellhead to a central collection point would be analyzed by the U.S. Geological Survey and the land-administering agency after the lessee submitted a proposed surface use plan for the leasehold.) If anticipated environmental impacts of the proposed pipeline or public interest were determined to be significant, an environmental impact statement would be prepared.

FIGURE 2



SOURCE: Oregon Office of Energy Research and Planning, Transition: A Report to the Oregon Energy Council. January 1, 1975.

A-7

In 1975, the Oregon Legislature passed legislation requiring proponents of natural gas pipelines 16 inches or greater in diameter and 5 miles or longer in length to obtain a site certificate from the Oregon Energy Facility Siting Council. The certificate is to contain conditions "for the protection of public health and safety." The council is authorized to commission a study of "any aspect of the proposed energy facility."(11) The Oregon Department of Energy, the Council's administrative arm, published draft site certificate application rules for pipelines in February 1976. The proposed rules would require pipeline proponents to describe the environmental impacts of the proposed pipeline.

The Office of Pipeline Safety, U.S. Department of Transportation, and the Oregon Public Utility Commission regulate the construction and operation of gas pipelines to insure safety standards are met.

Oil produced on Federal leases in Oregon could be refined (a) within the State at existing refineries, refineries now being planned, or refineries built specifically to refine crude oil produced in the State; or (b) in neighboring states such as California or Washington.

At the present time, there are three small refineries in Oregon; all are located in Portland (12):

Company	Capacity
Chevron Asphalt	18,000 barrels asphalt per day
Nu-Way Oil	2,000 barrels lubricants per day
Ager & Davis Refining	3,500 barrels mixed grade oil per day

Plans have been announced for three new refineries in the State (13):

Company	Proposed Location	Proposed Capacity
Columbia Independent Refiners	Portland	50,000 barrels per day
Cascade Energy	Rainier	30,000 barrels per day
Charter Energy	St. Helens	52,400 barrels per day

If oil were produced in Oregon, it might replace some of the feed stocks which the new refineries would otherwise have to import from outside the State.

If oil produced in Oregon were not refined within the State, it probably would be transported either to refineries in the Puget Sound area in Washington or to California. At present, about 60 percent of the petroleum products consumed in Oregon are refined in the Puget Sound area.(14)

Unlike natural gas, many miles of new pipeline might be constructed to transport oil produced in the State. There are two petroleum product pipelines but no crude oil pipelines in the State. Other transportation modes might also be used.

The site certification process cited previously for natural gas pipelines in Oregon also applies to crude oil and petroleum product pipelines six inches or greater in diameter and five miles or longer in length. If a proposed petroleum pipeline crossed Federal lands, the environmental impacts of the pipeline would be assessed by the land-administering agency.

At the present time, the Oregon Energy Facility Siting Council's site certification process for energy facilities does not apply to refineries.(15) However, before a refinery could be built in Oregon, air contaminant and waste discharge permits would be required from the Oregon Department of Environmental Quality.

Air Contaminant Discharge Permit: In addition to requiring the permit applicant to limit emissions to levels stipulated in State regulations, the State permit also is used to implement the U.S. Environmental Protection Agency's regulations in Title 40, Code of Federal Regulations, Part 60, "Standards of Performance for Certain New Stationery Sources." Performance standards for particulate matter, carbon monoxide, and sulfur dioxide emissions from petroleum refineries are included in Subpart A of the Federal regulations and in Section 25-000.70, Chapter 340 of the Oregon Administrative Rules.

Waste Discharge Permit: Waste discharge permits prescribe limitations on the discharge of wastes into public waters or elsewhere into the environment in a manner that may affect the quality of public waters. If discharges into navigable waters are proposed, the State's permit also serves as the permit required under the U.S. Environmental Protection Agency's regulations in 40 CFR 125 on the National Pollutant Discharge Elimination System. Permits for refineries are based on State water quality standards and EPA's Effluent Guidelines and Standards for Petroleum Refining Point Source Category (40 CFR 419).

Proponents of a refinery probably would also be required to prepare a Spill Prevention Control and Countermeasure Plan. The Environmental Protection Agency's regulations on "Oil Pollution Prevention in Non-Transportation Related Onshore and Offshore Facilities (40 CFR 112) require such a plan for non-transportation related facilities ". . . that have discharged or could reasonably be expected to discharge oil in harmful quantities, as defined in 40 CFR Part 110, into or upon the navigable waters of the United States or adjoining shorelines. . . ." Most refineries probably would be located at sites where there would be a reasonable expectation that harmful quantities of oil could be discharged.

References

1. Vernon C. Newton, Jr., 1976. "Oil and Gas Exploration in 1975." *The Ore Bin*. Oregon Department of Geology and Mineral Industries. *Vol. 38, No*. 1, 609.

2. _______________. 1974. "Oil and Gas Exploration in 1973." *The Ore Bin*. Oregon Department of Geology and Mineral Industries. *Vol. 36, No*. 1, 4-8.

3. F. J. Wagner. 1975. "North American Drilling Activity in 1974." *Bulletin of the American Association of Petroleum Geologists*. *Vol. 58, 1273*.

4. *Ibid*.

5. *Ibid*.

6. H. W. Menard and G. Sharman. 1975. "Scientific Uses of Random Drilling Models." *Science*. Vol. 190, No. 4212.

7. *Op. cit*.

8. Personal communication, William Lee, Conservation Division, U.S. Geological Survey, Menlo Park, CA.

9. Personal communication, John Fackler, Conservation Division, U.S. Geological Survey, Los Angeles, CA.

10. Personal communication, Wally Sutherland, Conservation Division, U.S. Geological Survey, DEnver, CO.

11. Oregon Revised Statutes 453.355.

12. Personal communication, Vernon Newton, Oregon Department of Geology and Mineral Industries, Portland, OR.

13. *Ibid*.

14. Oregon Office of Energy Research and Planning. 1975. *Transition: A Report to the Oregon Energy Council*. p. 55.

15. Personal communication, W. R. Vermeere, Oregon Department of Energy, Salem, OR.

APPENDIX B

WILDLIFE INVENTORY LIST

B

Mammals

Mule Deer (*Odocoileus hemionus*)
Pronghorn Antelope (*Antilocapro americana*)
Rocky Mtn. Elk (*Cervus canadensis*)
Rocky Mtn. Shrew (*Sorex vagrans*)
Malheur Shrew (*Sorex preblie*)
Masked Shrew (*Sorex cinereus*)
Water Shrew (*Sorex palustris*)
Merriam Shrew (*Sorex merriami*)
Long-eared Myotis (*Myotis erotis*)
Western Pipistrelle (*Pipistrellus hesperus*)
Little Brown Bat (*Myotis lucifugus*)
Fringed Brown Bat (*Myotis thysanodes*)
Western Brown Bat (*Myotis volans*)
California Brown Bat (*Myotis californicus*)
Masked Brown Bat (*Myotis subulatus*)
Big Brown Bat (*Eptesicus fuscus*)
Hoary Bat (*Lasiurus cinereus*)
Lump-nosed Bat (*Corynorhinus rafinesquei*)
Pallid Bat (*Antrozous pallidus*)
Big Freetail Bat (*Tadarida molossa*)
Silver-haired Bat (*Lasionycteris noctivagans*)
Snowshoe Hare (*Lepus americanus*)
White-tailed Jackrabbit (*Lepus townsendi*)
Black-tailed Jackrabbit (*Lepus californicus*)
Pigmy Rabbit (*Sylvilagus idahoensis*)
Mountain Cottontail (*Sylvilagus nuttali*)
Yellow-bellied Marmot (*Marmota flaviventris*)
Pine Squirrel (*Tamiasciurus hudsonicus*)
Northern Flying Squirrel (*Glaucomys sabrinus*)
Belding Ground Squirrel (*Citellus beldingi*)
Townsend Ground Squirrel (*Citellus townsendi*)
White-tailed Antelope Squirrel (*Citellus leucurus*)
Mantled Ground Squirrel (*Callospermophilus lateralis*)
Least Chipmunk (*Eutamias minimus*)
Yellow Pine Chipmunk (*Eutamias amoenus*)
Northern Pocket Gopher (*Thomomys talpoide*)
Sierra Pocket Gopher (*Thomomys monticola*)
Northern Grasshopper Mouse (*Onychomys levcogaster brevicaudus*)
Great Basin Pocket Mouse (*Perognathus parvus*)
Heerman Kangaroo Rat (*Dipodomys heermanni*)
Great Basin Kangaroo Rat (*Dipodomys microps*)
Ords Kangaroo Rat (*Dipodomys ordi*)
Desert Harvest Mouse (*Reithrodontomys megalotis*)
Canyon Mouse (*Peromyscus crinitus*)
Deer Mouse (*Peromyscus maniculatus*)
Western Jumping Mouse (*Zapus princeps*)

Desert Packrat (*Neotoma lepida*)
Bushy Tailed Packrat (*Neotoma cinera*)
Long Tailed Vole (*Microtus longicaudus*)
Mountain Vole (*Microtus montanus*)
Sagebrush Vole (*Lagurus curtatus*)
Porcupine (*Erethizon dorsatum*)
Coyote (*Canis latrans*)
Black Bear (*Ursus americanus*)
Raccoon (*Procyon lotar*)
Long-tailed Weasel (*Mustela frenata*)
Short-tailed Weasel (*Mustela erminea*)
Mink (*Mustela vision*)
Yuma Myotis (*Myotis yumanensis*)
Badger (*Taxidea taxus*)
Common Striped Skunk (*Mephitis mephitis*)
Western Spotted Skunk (*Spilogale gracilis*)
Mountain Lion (*Felis concolar*)
Bob Cat (*Lynx rufus*)

Birds

The oil and gas lease area bird list was divided into two areas, called "life zones," due to large differences in bird species found in these two areas.

The Conifer Life Zone includes ponderosa pine and associated species.

The High Desert Life Zone is that area south of the ponderosa pine vegetation zone.

Birds that are extremely rare (i.e. one sighting in 30 years) in Harney and Grant Counties were omitted. Preferred habitat may not be present in the area but has been included in the list.

CHECK-LIST KEY

ABUNDANCE

VC	Very common; 50 or more birds per day/observer/area
C	Common; 10-49 birds per day/observer/area
U	Uncommon; 0-9 birds per day/observer/area
R	Rare; 5 or less birds per year/observer/area
VR	Very rare; 5 or less birds per year/all observers/state
O	Occasional; not seen every year, but occurs regularly
A	Accidental; 5 or less total records for the state or area
I	Irregular; abundance and or occurrence fluctuates greatly from year to year

NAME	PREFERRED HABITAT	LIFE ZONE HIGH DESERT	 CONIFER
Canada Goose (Branta canadensis)	Aquatic, fields	VC	C
Mallard (Anas platyrhynchos)	Aquatic	VC	C
Gadwall (Anas strepera)	Aquatic	VC	U
Pintail (Anas acuta)	Aquatic	VC	VC
Green-winged Teal (Anas crecca)	Aquatic	VC	C
Blue-winged Teal (Anas discors)	Aquatic	U	
Cinnamon Teal (Anas cyanoptera)	Aquatic	VC	C
American Wigeon (Anas americana)	Aquatic	VC	
Northern Shoveler (Anas clypeata)	Aquatic	C	
Wood Duck (Aix sponsa)	Aquatic - nests along Silvies River	U	U
Redhead (Aythya americana)	Aquatic	VC	
Canvasback (Aythya valisineria)	Aquatic	VC	
Band-tailed Pigeon (Columba fasciata)	Coast conifers		
Mourning Dove (Zenaida macroura)	Farmland, rangeland	VC	C
Screech Owl (Otus asio)	Deciduous woods	R	U
Common Goldeneye (Bucephala clangula)	Aquatic	U	C
Ruddy Duck (Oxyura jamaicensis)	Aquatic	VC	
Turkey Vulture (Cathartes aura)	Farmlands, rangelands	C	C
Goshawk (Accipiter gentilis)	Forests	O	R
Sharp-shinned Hawk (Accipiter striatus)	Forests	O	U
Cooper Hawk (Accipiter cooperii)	Forests, canyons	R	U
Red-railed Hawk (Buteo jamaicensis)	Forests, farmlands	U	U
Swainson's Hawk (Buteo swainsonii)	Dry plains, foothills	U	
Rough-legged Hawk (Buteo lagopus)	Plains, marshes	C	
Ferruginous Hawk (Buteo regalis)	Rangelands	O	
Golden Ealge (Aquila chrysaetos)	Mountains, plains	U	U
Northern Bald Eagle (Haliaeetus leucocephulus alascanus)	Rangelands - winter resident	U	U
Marsh Hawk (Circus cyaneus)	Marshes, rangeland	C	
Ospreay (Pandion haliaetus)	Aquatic	U	
Gyrfalcon (Falco rusticolus)	Open mountains - Steens Mt., conifers	R	R
Prairie Falcon (Falco mexicanus)	Prairies, deserts	U	
American Kestrel (Falco sparverius) (Sparrow Hawk)	Open country	C	C

Blue Grouse (*Dendragapus obscurus*)	Wooded slopes		C
Ruffed Grouse (*Bonasa umbellus*)	Mixed or deciduous woods		U
Sage Grouse (*Centrocercus urophasianus*)	Sagebrush	C	R
California Quail (*Lophortyx californicus*)	Woodlands, brush	C	C
Mountain Quail (*Oreortyx pictus*)	Woodlands, forests	U	U
Chukar (*Alectoris chukar*)	Rocky areas, sagebrush	C	U
American Coot (*Fulica americana*)	Aquatic	VC	VC
Flammulated Owl (*Otus flammeolus*)	Ponderosa pine	A	VR
Great Horned Owl (*Bubo virginianus*)	All areas	C	U
Pygmy Owl (*Glaucidium gnoma*)	All areas	C	U
Long-eared Owl (*Asio otus*)	Mixed woods	U	R
Common Nighthawk (*Chordeiles minor*)	All open lands	VC	U
Common Flicker (*Colaptes auratus*)	Mixed woods, sagebrush, conifers		R
Pileated Woodpecker (*Dryocopus pileatus*)	Conifers		R
Lewis' Woodpecker (*Asyndesmus lewis*)	All woods	U	U
Hairy Woodpecker (*Dendrocopus villosus*)	Mixed woods, conifers	R	U
Downy Woodpecker (*Dendrocopus pubescens*)	Mixed woods, deciduous	U	U
Eastern Kingbird (*Tyrannus tyrannus*)	River valleys	U	U
Western Kingbird (*Tyrannus verticalis*)	Ranches	U	U
Ash-throated Flycatcher (*Myiarchus cinerascens*)	Juniper, sagebrush	U	R
Say's Phoebe (*Sayornis saya*)	Ranches, sagebrush	U	U
Hammond's Flycatcher (*Empidonax hammondii*)	Conifers	R	U
Gray Flycatcher (*Empidonax wrightii*)	Sagebrush, junipers	C	
Western Wood Peewee (*Contopus sordidulus*)	Conifers, all woods	U	C
Horned Lark (*Eremophila alpestris*)	Open fields, rangelands, alpine	VC	U
Violet-green Swallow (*Tachycineta thaslassina*)	Around water	C	U
Tree Swallow (*Iridoprocne bicolor*)	River, mountain lakes	VC	U
Cliff Swallow (*Petrochelidon pyrrhonota*)	Rock scarps, buildings	VC	C
Gray Jay (*Perisoreus canadensis*)	Mountain conifers	R	U
Steller's Jay (*Cyanocitta stelleri*)	Mixed conifers	R	U
Black-billed Magpie (*Pico pico*)	Rangelands	C	U
Common Raven (*Corvus corax*)	Rangelands, rock scarps	C	C
Common Crow (*Corvus brachyrhynchos*)	Open woods, farms	U	C
Clark's Nutcracker (*Nucifraga columbiana*)	Timberline conifers	R	U
Mountain Chickadee (*Parus gambeli*)	Conifers, junipers	R	C
Pygmy Nuthatch (*Sitta pygmaea*)	Ponderosa pine		C
Dipper (*Cinclus mexicanus*)	Mountain streams	R	U
Winter Wren (*Troglodytes troglodytes*)	Dense conifers	R	C

American Robin (Turdus migratorius)	Urban fields	VC	VC
Hermit Thrush (Catharus guttata)	Deciduous woods, conifers	U	C
Swainson's Thrush (Catharus ustulata)	Conifers, mixed woods	R	C
Mountain Bluebird (Sialia currucoides)	Sagebrush, junipers	C	C
Townsends Solitaire (Myadestes townsendi)	Conifers, juniper	C	U
Golden-crowned Kinglet (Regulus satrapa)	Conifers, sagebrush	R	C
Cedar Waxwing (Bombycilla cedrorum)	Open woods, near water	U	C
Starling (Sturnus vulgaris)	Open fields, farms	C	C
Western Meadowlark (Sturnella neglecta)	Fields, sagebrush	VC	C
Yellow-headed Blackbird (Xanthocephalus xanthocephalus)	Marshes	VC	U
Red-winged Blackbird (Agelaius phoeniceus)	Marshes	VC	C
Brewers Blackbird (Euphagus cyanocephalus)	Fields, farms	VC	VC
Western Tanager (Piranga ludoviciana)	Conifers	C	C
Cassin's Finch (Carpodacus cassinii)	Ponderosa pine, alpine	U	C
Pine Siskin (Spinus pinus)	Conifers, mixed woods	U	C
Red Crossbill (Loxia curvirostra)	Conifers	U	C
Rufous-sided Towhee (Pipilo erythrophthalmus)	Thickets	U	C
Dark-eyed Junco (Junco hyemalis)	Brush, mixed woods, conifers	U	VC
Song Sparrow (Melospiza melodia)	Thickets, brush	VC	VC

Fish

Redband Trout (Undescribed Species)
Rainbow Trout (*Salmo gairdneri*)
Malheur Sculpin (*Cottus bairdi*)
Redside Shinter (*Richardsonius balteatus*)
Longnose Dace (*Rhinichthys cataractae dulcis*)
Speckled Dace (*Rhinichthys osculus*)
Chiselmouth (*Acrocheilus alutaceus*)
Bridgelip Sucker (*Catostomus columbianus*)

Amphibians

Northern Long Toed Salamander (*Ambystoma macradactylum columbianum*)
Great Basin Spadefoot Toad (*Scaphiopus intermontanus*)
Western Toad (*Bufo boreas*)
Pacific Tree Frog (*Hyla regilla*)
Western Spotted Frog (*Rana pretiosa*)

Reptiles

Western Fence Lizard (*Sceloporus occidentalis*)
Sagebrush lizard (*Sceloporus graciosus*)
Side-blotched Lizard (*Uta stansburiana*)
Short-horned Lizard (*Phrynosoma douglasi*)
Western Whiptail (*Cnemidophorus tigris*)
Western Skink (*Eumeces skiltonianus*)
Western Rattlesnake (*Crotalus viridis*)
Gopher Snake (*Pituophis melanoleucus*)
Western Gartersnake (*Thamnophis elegans vagrans*)
Racer Snake (*Coluber constricta*)
Rubber Boa (*Charina bottae utahensis*)
Common Garter Snake (*Thamnophis sirtalis fitchi*)

APPENDIX C

ARCHEOLOGICAL REPORT

C

APPENDIX - ARCHEOLOGICAL REPORT

This report is a review of the existing literature on archaeological and historical resources for the oil and gas lease area. Because of the limitations of time, personnel, weather, and the large size of the area, actual on the ground reconnaissance is not now feasible. When a ground search is conducted, this preliminary investigation should assist in forming the reconnaissance plan.

The Prehistoric Culture

The cultural trend of the western desert during prehistoric times has been generally described by J. Jennings (1968). Desert culture is distinctive because it exploited nearly the total environment. Highly adapted to an arid ecosystem, aboriginal peoples of the western desert followed a pattern of seasonal migration. Ranging from Sonoran to Arctic-Alpine environments, they exploited a different inventory of species in each ecological zone.

While technological development was rudimentary, utilization of natural resources was skillful. A modified list of diagnostic artifacts of desert culture includes such traits as an intensive, unrestricted exploitation of species, small seed harvesting (predominantly pinion pine); fur cloth (mainly rabbitskin); woven sandles (sometimes hide moccasins); the atlatl and dart; a wide variety of projectile points, knives, milling stones, choppers and scrapers; wooden clubs; tubular pipes or sucking tubes; vegetable quids; basketry; oliva and olivella shells from California; and bone awls.

Desert culture reflects 12,000 years of continuous adaptation to an arid climate. Comparisons of artifact inventories such as those from Danger Cave

(Jennings, 1957) and Hogup Cave (Aikens, 1970) in Utah, Fort Rock and Roaring Springs Caves (Cressman and Krieger, 1940) in Oregon, and Humboldt Cave (Heizer and Krieger, 1956) and Lovelock Cave (Loud and Harrington, 1929) in Nevada show a broad similarity in both content and time span of desert culture for the northern Great Basin.

Since the 1950's and the development of the radio-carbon dating technique, scores of western desert sites have yielded dates of 8,000 to 10,000 years old. In Oregon, one of the 75 woven sandles Cressman discovered in Fort Rock Cave was dated as more than 10,000 years old.

Recent Cultural History

The Northern Paiute Indians inhabited the Harney and Alvord Basins when explorers and trappers first reached southeastern Oregon. For the fifty years prior to their final confinement to reservations in 1870's their way of life underwent radical change and adaptation to encroachment by whites. Some of the native people adopted a nomadic raiding pattern that increased white hostility and accelerated the inevitable move to confine them.

The undisturbed precontact form of life was never recorded. Ethnographic studies have rescued information on the historic Paiutes, but it is the task of archaeology to reconstruct aboriginal lifeways before white contact and the acquisition of the horse. Basic descriptions of historic Paiutes is contained in The Northern Paiute Bands by Omar C. Stewart, Ethnography of the Surprise Valley Paiute by Isabel T. Kelly, Karnee:A Paiute Narrative by Lolla Scott, and Paiute Sorcery by Beatrice B. Whiting.

Review of Previous Archaeological Research

Four major research problems are central to Great Basin prehistory. They are: 1) The chopper-scraper issue; 2) The debate on altithermal occupation of the Great Basin; 3) The problem of chronology in an area where most finds lack stratigraphic context; and 4) Studies on regional variants of settlement/subsistence network patterns.

The Chopper-Scraper Issue: Alex Krieger (1964) views this complex as a very ancient substratum upon which American cultural traditions are based. There are never any associated projectile points, finely chipped knives, or other more specialized tools. The point of contention with these crude, percussion-flaked tools is their professed antiquity. On typological grounds the complex can be equated with the Early and Middle Paleolithic of Eurasia. Logic thus requires a pre-Wisconsin entry of man into the new world, yet many archaeologists are unwilling to accept even a mid-Wisconsin date.

No chopper-scraper site has yet satisfied even minimum control standards insisted upon by archaeologists for the validation of antiquity. Most collections are surface finds or claim age ascriptions that do not support rigorous examination. Resolution of this issue with proof of age for the complex would be a key contribution to archaeology.

The question of the earliest human occupation of the Great Basin is a related concern. The earliest confirmed date of 13,200 + ± 700 B.P. comes from Fort Rock Cave. Since this site was occupied only after the lowering of the Pleistocene Lake levels, it is logical that man was in this region before that date. Earlier sites should be associated with fossil waterways, terraces, or beaches.

The Altithermal Problem: The Neothermal concept of climatic change proposed by Antevs (1948) has been generally accepted for the Great Basin. The scheme is based on complex correlations between temperature, rainfall, storm paths, palynological findings, strand lines on fossil lakes, recent sediments, fossil watercourse histories, and theories about runoff rates and erosional patterns. Antevs hypothesized a three-phase temperature sequence for the last 10,000 years. The middle period (the Altithermal) was warmer than the present, and is the time many of the Great Basin lakes are thought to have dried up.

This period was dated by Antevs as occuring between 7,000 and 4,500 years ago. The concern here is with the effects of the hot, dry Altithermal climate on human occupation of the Great Basin, Did it represent a drastic change in climate, and was the region abandoned totally or only selectively during this time?

References which contain environmental data and document Altithermal occupation in southeastern Oregon are: Meinzer's (1922) study of Pleistocene lakes and shorelines, Bedwell's (1970) study of the prehistory and environment of the pluvial Fort Rock Lake area of south central Oregon, and Fagan's (1974) study of Altithermal occupation of spring sites in southeastern and south central Oregon.

Fagan suggests that early sites are most frequently located at higher elevations, generally 5,000-6,000 feet. Much of the lease area has an elevation within this range. Furthermore, a number of springs and streams indicate good potential for archaeological sites of significance.

Chronology: Chronological ordering of sites in the Great Basin has been complicated by erosional and climatic factors that have left most sites lacking good stratigraphy and chemically datable artifacts. Typological cross-dating of projectile point types has become an acceptable method of dating these sites. An index series of point types is compiled from stratified, datable sites in the region. The series is bolstered by radiocarbon, obsidian hydration, and geologic dating information. The series is then used as a reference for dating sites not datable by other means.

Some work on chronology has been done for the Harney and Alvord Basins, notably John Fagan, 1974. On the basis of the index series, he formulated a sequence of four periods: Period I, 150 to 3,000 B.P.; Period II, 3,000 to 5,000 B.P.; Period III, 5,000 to 7,000 B.P.; and Period IV, 7,000 to 11,000 B.P. Because of the tenuity of the method, more typological cross-dating for this area needs to be accomplished. Corroboration may be forthcoming from continuing research on previous archaeological surveys done in the area (Mack, 1975; Newman, 1975; Pettigrew, 1975).

Regional Variants of Desert Culture: Regional variation of exploitative patterns in the Great Basin was developing by 5,000 years ago. At the heart of the Great Basin, Humboldt and Lovelock Caves mark a specialization towards a lacustrine environment (Jennings, 1964; Loud and Harrington, 1929; and Heizer and Krieger, 1956).

M. Weide (1968) has formulated a model of lakeside adaptation for the Warner Lakes area in Oregon. The scheme has three poses: 1) winter villages of some size and permanence close to permanent water sources; 2) small, temporary and dispersed summer and spring encampments near freshwater springs and streams; and 3) small, upland hunting camps. The Harney and Alvord Lake Basins, both remnents of Pleistocene lakes formerly of greater extent, should be examined with reference to these models of lacustrine adaptation.

SELECTED REFERENCES

Aikens, C. Melvin
1970 Hogup Cave. University of Utah Anthropological Papers 93. University of Utah Press.

Antevs, Ernst
1948 Climatic Changes and Pre-White Man. University of Utah Bulletin, 38(20): 168-191.

Bedwell, Stephen F.
1970 Prehistory and Environment of the Pluvial Fort Rock Lake Area of South Central Oregon. Ph.D. Dissertation, Department of Anthropology, University of Oregon.

Cressman, L. S., Howell Williams and Alex Krieger
1940 Early Man in Oregon: Archaeological Studies in the Northern Great Basin. University of Oregon Monographs, Studies in Anthropology, No. 3. Eugene.

Fagan, John L.
1974 Altithermal Occupation of Spring Sites in the Northern Great Basin. University of Oregon Anthropological Papers, No. 6. Eugene.

Heizer, R. F., and A. D. Krieger
1956 The Archaeology of Humboldt Cave, Churchill County, Nevada. University of California Publications in American Archaeology and Ethnology 47(1): 1-190.

Jennings, Jesse D.
1957 Danger Cave. University of Utah Anthropological Papers 27.

1964 The Desert West. In "Prehistoric Man in the New World" ed. by J. D. Jennings and E. Norbeck: 149-174. University of Chicago Press, Chicago.

1968 Prehistory of North America. New York:McGraw-Hill Book Co.

Kelley, Isabel T.
1932 Ethnography of the Surprise Valley Paiute. University of California Publications in American Archaeology and Ethnology. University of California Press.

Krieger, Alex
1964 Early Man in the New World. In "Prehistoric Man in the New World" J. D. Jennings and E. Norbeck (eds): 23-81. University of Chicago Press.

Loud, L. L. and Mark R. Harrington
1929 Lovelock Cave, University of California Publications in American Archaeology and Ethnology 25(1): 1-183.

Mach, Joanne M.
1975 Cultural Resources Inventory of the Potential Glass Buttes Geothermal Lease Area, Lake, Harney, and Deschutes Counties, Oregon. Final Report to BLM, University of Oregon, Department of Anthropology, Eugene.

Meinzer, Oscar
1922 Map of the Pleistocene Lake of the Basin and Range Province and its significance. Bulletin of the Geological Society of America, 33: 541-552.

Newman, Thomas M., Robert Bogue, William Cannon, Ruth McGilvra, and Roger Wiggin
1975 Alvord Desert Potential Geothermal Resource Area Cultural Resource Survey. Final Report to BLM, Portland State University Department of Anthropology. Portland.

Pettigrew, Richard M.
1975 Cultural Resources Survey in the Alvord Basin, Southeastern Oregon. Final Report to BLM, University of Oregon, Department of Anthropology. Eugene.

Scott, Lolla
1966 Karnee:A Paiute Narrative. University of Nevada Press.

Steward, Omer C.
1939 The Northern Paiute Bands. University of California Anthropological Records, Vol. 2, No. 3: 127-149.

Weide, Margaret L.
1968 Cultural Ecology of Lakeside Adaptation in the Western Great Basin. Ph.D. Dissertation, University of California, Los Angeles.

Whiting, Beatrice
Paiute Sorcery.

APPENDIX D

U. S. GEOLOGICAL SURVEY OIL AND GAS OPERATING REGULATIONS

D

CODE OF FEDERAL REGULATIONS

TITLE 30—MINERAL RESOURCES

CHAPTER II

GEOLOGICAL SURVEY

PART 221

OIL AND GAS OPERATING REGULATIONS

UNITED STATES

DEPARTMENT OF THE INTERIOR

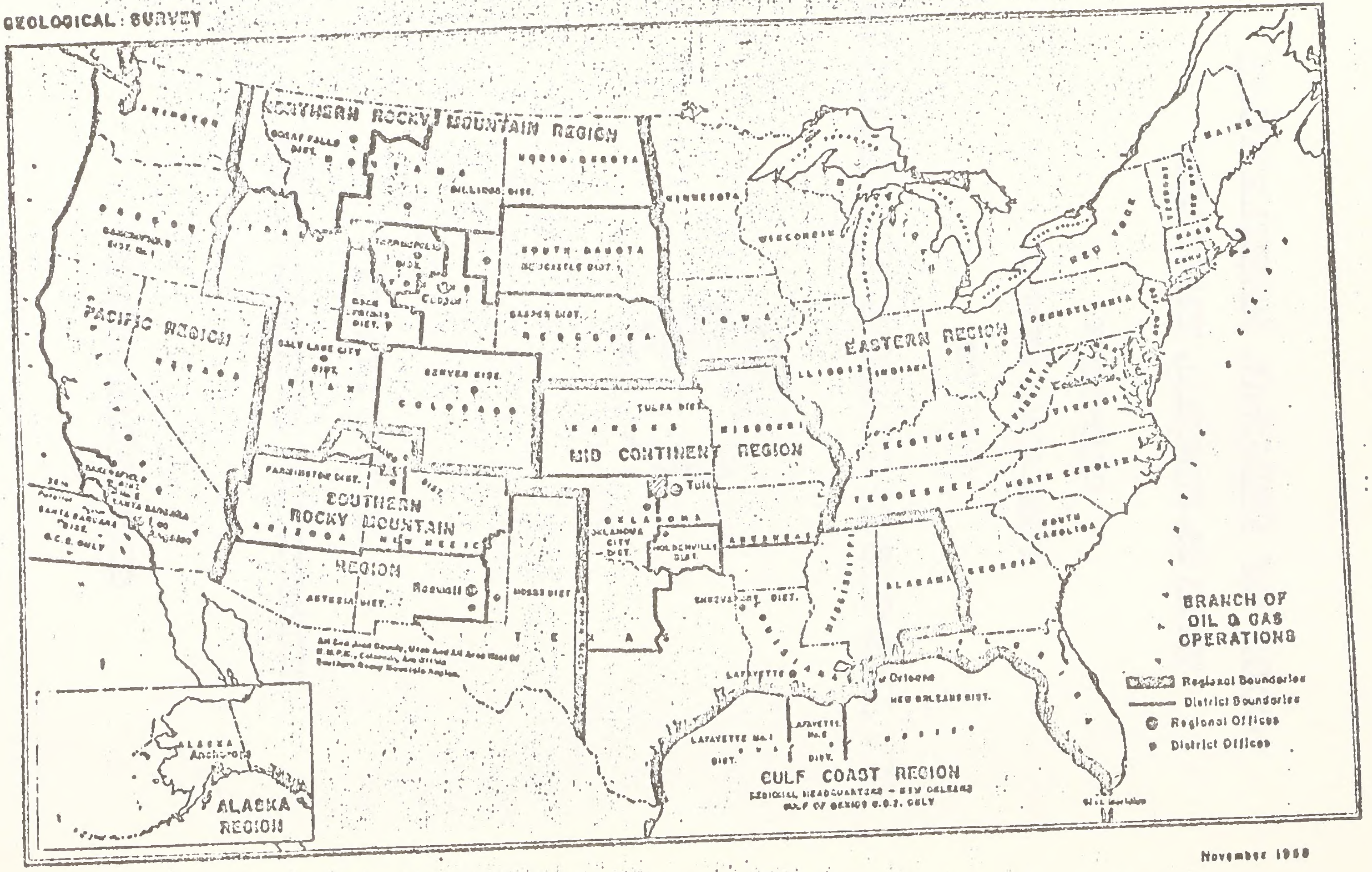
GEOLOGICAL SURVEY

Reprint of December 1968, with appendix

D-1

GEOLOGICAL SURVEY

CONSERVATION DIVISION



November 1958

PREFACE

This booklet contains the regulations governing the conduct of oil and gas operations on public, acquired, Indian (except the Osage reservation, Osage County, Oklahoma), and certain Naval Petroleum Reserve lands.

The regulations governing the leasing and the provisions of leases for oil and gas of the public lands are included in 43 CFR Parts 3100 and 3120; of the acquired lands and under rights-of-way, in 43 CFR Part 3210 and 3310, respectively and of Indian lands, in 25 CFR Parts 171, 172, 173, 174, and 184.

The Unit Plan Regulations are included in 30 CFR Part 226. Regulations relating to communitization agreements are in 43 CFR 3121.3.

The regulations herein are not applicable to the submerged lands of the outer Continental Shelf, such regulations, issued pursuant to the Outer Continental Shelf Lands Act (67 Stat. 462) are included in 30 CFR Part 250. The regulations governing the leasing and the provisions of leases for oil and gas of the submerged lands of the outer Continental Shelf are included in 43 CFR Part 3380.

Part 221—Oil and Gas Operating Regulations

INTRODUCTION; DEFINITIONS

Sec.
221.1 Introduction.
221.2 Definitions.

JURISDICTION AND FUNCTIONS OF SUPERVISOR

221.3 Jurisdiction.
221.4 General functions.
221.5 Supervision of operations.
221.6 Reports and recommendations.
221.7 Reports and notices.
221.8 Required samples, tests, and surveys.
221.9 Damage to mineral deposits, directional drilling, lease obligations well abandonment.
221.10 Well potentials and permissible flow.
221.11 Well-spacing and well-casing; technical assistance to lessees.
221.12 Production records; rentals, royalties, and payments; drainage and waste.
221.13 Division orders, run tickets, sales agreements or contracts.
221.14 Suspension of operations and production.
221.15 Beginning or resumption of drilling or producing operations.
221.16 Enforcement.

Sec.
221.17 Appeals action.

REQUIREMENTS FOR ALL LESSEES (INCLUDING DESIGNATED OPERATORS)

221.18 Lease terms, regulations, instructions of supervisor, waste, damage, safety, and bond.
221.19 Designated operator (or agent).
221.20 Well-location restrictions.
221.21 Well-spacing and well-casting program, well operations, required offsets, diligence, compensation in lieu of drilling.
221.22 Well designations, property boundaries, markers for abandoned wells.
221.23 Well records and reports, plats and maps, samples, tests, and surveys.
221.24 Precautions necessary in areas where high pressures are likely to exist.
221.25 Cable tool drilling precautions.
221.26 Rotary tool drilling precautions.
221.27 Vertical drilling.
221.28 Water shut-offs; formation tests.
221.29 Protection of upper productive strata.
221.30 Open flows and control of "wild" wells.
221.31 Emulsion and dehydration.
221.32 Pollution and surface damage.
221.33 Gaging and storing oil.
221.34 Well abandonment.
221.35 Waste prevention; beneficial use.
221.36 Accidents and fires.
221.37 Workmanlike operations.
221.38 Sales contracts; division orders.
221.39 Relief from operating, royalty, and rental requirements.
221.40 Royalty and rental payments.
221.41 Surface rights on Indian lands.
221.42 Costs or damages.

MEASUREMENT OF PRODUCTION AND COMPUTATION OF ROYALTIES

221.43 Measurement of oil.
221.44 Measurement of gas.
221.45 Determination of gasoline content of natural gas.
221.46 Quantity basis for computing royalties on natural gasoline, butane, propane, and other liquid hydrocarbon substances extracted from gas.
221.47 Value basis for computing royalties.
221.48 Royalty rates on oil; flat-rate leases.
211.49 Royalty rates on oil; sliding- and step-scale leases (public land only).
221.50 Royalty on gas.
221.51 Royalty on casing-head or natural gasoline, butane, propane, or other liquid hydrocarbon substances extracted from gas.
221.52 Royalty on drip gasoline or other natural condensate.

PROCEDURE IN CASE OF DEFAULT BY LESSEE

221.53 Shutting down operations; lease cancellations.
221.54 Liquidated damages.
Sec.
221.55 Payment of damages.
221.56 Damages to Indian property.

REPORTS TO BE MADE BY ALL LESSEES (INCLUDING OPERATORS)

221.57 General requirements.
221.58 Sundry notices and reports on wells (Form 9-331A Public; Form 9-331B Indian).
221.59 Log and history of well (Form 9-330).
221.60 Monthly report of operations (Form 9-329 Public; Form 9-329A Indian).
221.61 Daily report of gas-producing wells (Form 9-352).
221.62 Statement of oil and gas runs and royalties (Form 9-361 Public; Form 9-361A Indian).
221.63 Royalty and rental remittance (Form 9-314A Indian).
221.64 Royalty and rental remittance (Form 11ND Naval Petroleum Reserves).
221.65 Special forms or reports.
221.66 Appeals.
221.67 Effective date; repeal of prior regulations.

AUTHORITY: The provisions of this Part 221 issued under sec. 3, 26 Stat. 795, secs. 18, 14, 27, 28, 32, 41 Stat. 426, 442, as amended, 448, as amended, 449, as amended, 450 sec. 7, 42 Stat. 1450, 43 Stat. 244, sec. 6, 46 Stat. 374, sec. 39, 47 Stat. 798, as amended, sec. 40, 48 Stat. 977, sec. 3, 49 Stat. 679, 50 Stat. 842, as amended, sec. 4, 52 Stat. 348, sec. 10, 61 Stat. 915; 25 U.S.C. 397, 356, 30 U.S.C. 223, 184, 185, 189, 236, 25 U.S.C. 398, 30 U.S.C. 306, 209, 229a, 236a, 2211, 25 U.S.C. 396d, 30 U.S.C. 359.

SOURCE: The provisions of this Part 221 appear at 7 F.R. 4132, June 2, 1942, unless otherwise noted.

INTRODUCTION; DEFINITIONS

§ 221.1 Introduction.

The regulations in this part will govern the development and production of deposits of oil, gas, and casing-head or natural gasoline, including propane, butane and other hydrocarbons, and fluids, and lands containing such deposits owned or controlled by the United States, and under jurisdiction of the Secretary by law or administrative arrangement. The regulations in this part shall be administered under the Director of the Geological Survey, except that as to lands within naval petroleum reserves they shall be administered under such official as the Secretary of the Navy shall designate.

D-4

§ 221.2 *Definitions.* The following terms as used in the regulations in this part shall have the meanings here given:

(a) *Secretary.* The Secretary of the Interior, except where lands in naval petroleum reserves are involved, and in that case the Secretary of the Navy.

(b) *Director.* The Director of the Geological Survey, Washington, D. C., having administrative direction of the enforcement of the regulations in this part.

(c) *Supervisor.* A representative of the Secretary, under administrative direction of the Director, authorized and empowered to supervise and direct oil and gas operations and to perform other duties prescribed in the regulations in this part, or any subordinate of such representative acting under his direction.

(d) *Officer in charge.* The supervisor or such other officer as the Secretary may designate to supervise technical operations for the development and production of oil and gas on restricted Indian lands. Over such lands the officer so designated shall exercise the authority and power and perform the duties of supervisor as provided in the regulations in this part.

(e) *Superintendent.* The superintendent of an Indian agency, or other officer authorized to act in matters of record, law, and collections with respect to oil or gas leases for restricted Indian lands.

(f) *Lease.* An agreement which in consideration of covenants to be observed, grants to a lessee the exclusive right and privilege of developing and producing oil or gas deposits owned by the lessor subject to the regulations in this part.

(g) *Leased lands, leasehold.* Lands and deposits covered by a lease as defined in paragraph (f) of this section.

(h) *Producing lease.* A producing lease is one including land on which there is a producible well, either active or shut in, or land determined by the supervisor to be subject to subsurface drainage.

(i) *Lessor.* The party to a lease who holds title to the leased lands.

(j) *Lessee.* The party authorized by a lease, or approved assignment thereof, to develop and produce oil or gas on the leased lands in accordance with the regulations in this part, including all parties holding such authority by or through him.

(k) *Register.* A representative of the Bureau of Land Management in charge of a District Land Office.

(l) *Operator.* The individual, partnership, firm, or corporation that has control or management of operations on the leased land or a portion thereof. The operator may be a lessee, designated agent of the lessee, or holder of rights under an approved operating agreement.

(m) *Designated operator or agent.* The local representative of the lessee or of the operator; may be the holder of operating rights under an approved operating agreement.

(n) *Waste of oil or gas.* Waste of oil or gas, in addition to its ordinary meaning, shall mean the physical waste of oil or gas, and waste, loss, or dissipation of reservoir energy existent in any deposit containing oil or gas and necessary or useful in obtaining the maximum recovery from such deposit.

(1) Physical waste of oil or gas shall be deemed to include the loss or destruction of oil or gas after recovery thereof such as to prevent proper utilization and beneficial use thereof, and the loss of oil or gas prior to recovery thereof by isolation or entrapment, by migration, by premature release of natural gas from solution in oil, or in any other manner such as to render impracticable the recovery of such oil or gas.

(2) Waste of reservoir energy shall be deemed to include the failure reasonably to maintain such energy by artificial means and also the dissipation of gas energy, hydrostatic energy, or other natural reservoir energy, at any time at a rate or in a manner which would constitute improvident use of the energy available or result in loss thereof without reasonably adequate recovery of oil.

(o) *Gas.* Any fluid, either combustible or noncombustible, which is produced in a natural state from the earth and which maintains a gaseous or rarefied state at ordinary temperature and pressure conditions.

(p) *Oil, crude oil.* Any liquid hydrocarbon substance which occurs naturally in the earth, including drip gasoline or other natural condensates recovered from gas, without resort to manufacturing process.

JURISDICTION AND FUNCTIONS OF SUPERVISOR

§ 221.3 *Jurisdiction.* Drilling and producing operations, handling and gaging of oil and the measurement of gas or other products, determination of royalty liability, receipt and delivery to those entitled thereto of royalty accruing to the lessor and paid in amount of production, determination of amount and manner of payment of damages assessed under authority of the regulations in this part for defaults of noncompliance with duties by the lessee and, in general, all operations subject to the regulations in this part are under the jurisdiction of the supervisor for any district as delineated by the Director. As to producing leases of Indian lands, the officer in charge, and as to lands within naval petroleum reserves, the supervisor shall determine rental liability, record rentals, royalties, and other payments, and maintain lease accounts. Upon request, the supervisor or the Director will advise any person concerning the regulations in this part, and will furnish technical information and advice relative to oil and gas development and operation on lands subject hereto.

§ 221.4 *General functions.* The supervisor is hereby authorized to require compliance with lease terms, with the regulations in this part, and all other applicable regulations, and with applicable law to the end that all operations shall conform to the best practice and shall be conducted in such manner as to protect the deposits of the leased lands and result in the maximum ultimate recovery of oil, gas, or other products with minimum waste. Inasmuch as conditions in one area may vary widely from conditions in another area, the regulations in this part are general, and detailed procedure hereunder in any particular area is subject to the judgment and discretion of the supervisor, and to any areal plan of development that may be adopted pursuant to law. The supervisor may require satisfactory evidence that a lease is in good standing, that the lessee or operator is authorized to conduct operations, and that an acceptable bond has been filed before permitting operations on the leased land.

§ 221.5 *Supervision of operations.* The supervisor shall inspect and supervise operations under the regulations in this part; prevent waste, damage to formations or deposits containing oil, gas, or water or to coal measures or other mineral deposits, and injury to life or property; and shall issue instructions necessary, in his judgment, to accomplish these purposes.

§ 221.6 *Reports and recommendations.* The supervisor shall make reports to his superior administrative officer as to the general condition of leased lands, and the manner in which operations are being conducted and departmental orders are being obeyed, and submit from time to time information and recommendations for safeguarding and protecting surface property and underlying mineral-bearing formations.

§ 221.7 *Reports and notices.* The supervisor shall prescribe the manner and form in which records of all operations, reports, and notices shall be made by lessees and operators.

§ 221.8 *Required samples, tests, and surveys.* When deemed necessary or advisable, the supervisor is authorized to require that adequate samples be taken and tests or surveys be made in acceptable manner without cost to the lessor to determine the identity and character of formations; the presence or waste of oil, gas, water, or reservoir energy; the quantity and quality of oil, gas, or water; the amount and direction of deviation of any well from the vertical; formation, casing, tubing, or other pressures; and whether operations are being conducted with due regard to the interests of the lessor.

§ 221.9 *Damage to mineral deposits, directional drilling, lease obligations, well abandonment.* The supervisor shall require correction, in a manner to be prescribed or approved by him, of any condition which is causing or is likely to cause damage to any formation containing oil, gas, or water or to coal measures or other mineral deposits, or which is dangerous to life or property or wasteful of oil, gas, or water; require substantially vertical drilling when necessary to protect interests in other properties; demand drilling in accordance with the terms of the lease or of the regulations in this part; and require plugging and abandonment of any well or wells no longer used or useful in accordance with such plan as may be approved or prescribed by him, and, upon failure to secure compliance with such requirement perform the work at the expense of the lessee, expending available public funds, and submit such report as may be needed to furnish a basis for appropriate action to obtain reimbursement.

§ 221.10 *Well potentials and permissible flow.* The supervisor is authorized to fix the percentage of the potential capacity of any oil or gas well that may be utilized or the permissible production of any such well when, in his opinion, such action is necessary to protect the interests of the lessor, or to conform with proration rules established for the field; and to specify the time and method for determining the potential capacity of such wells.

§ 221.11 *Well-spacing and well-casing; technical assistance to lessees.* The supervisor shall approve well-spacing and well-casing programs determined to be necessary for the proper development of the leases and assist and advise lessees in the planning and conduct of tests and experiments for the purpose of increasing the efficiency of operations.

§ 221.12 *Production records; rentals, royalties, and payments; drainage and waste.* The supervisor shall compile and maintain records of production and prices and determine royalties accrued, estimate drainage and compute losses to the lessor resulting therefrom, and estimate the amount and value of oil, gas, and other products wasted. The supervisor shall render monthly to the lessee, or his agent, statements showing the amount of oil, gas, casing-head or natural gasoline, propane, butane, or other hydrocarbons produced or sold and the amount or value of production accruing to the lessor as royalty from each lease; the loss by drainage or waste and the compensation due to the lessor as reimbursement; and, except as to any disposal of gas that shall have been determined by the Secretary of the Interior to be sanctioned by the laws of the United States and of the State in which it occurs, the amount and full value, computed at a price of not less than 5 cents per 1,000 cubic feet, of all gas wasted by blowing, release, escape into the air, or otherwise. Also, as to producing leases of Indian lands and lands within naval petroleum reserves, the supervisor shall determine rental liability, record rental, royalty, and other payments, and maintain lease accounts.

§ 221.13 *Division orders, run tickets, sales agreements or contracts.* The supervisor is authorized to approve, subject to such conditions as he shall prescribe, division orders or temporary purchase agreements granting to transportation agencies or purchasers authority to receive products from leased lands in accordance with Government rules and regulations; sign run tickets or other receipts for royalty oil or gas delivered to a representative of the lessor or to the lessor's account; and approve sales agreements and contracts, subject to any conditions, modification, or revocation that may be prescribed on review thereof by the Director.

Cross References: For regulations relating to approval of sales agreements or contracts, see Part 223 of this chapter. (See Appendix)

§ 221.14 *Suspension of operations and production.* On receipt of an application for suspension of operations or production or for relief from any drilling or producing requirement under a lease, the supervisor shall forward such application, with a report and recommendation, to the appropriate official and, pending action thereon, grant such temporary approval as he may deem warranted in the premises, or reject such application, subject to the right of appeal as provided in § 221.68. (See Appendix)

§ 221.15 *Beginning or resumption of drilling or producing operations.* Where drilling or producing operations have been suspended on a lease, the supervisor may approve in writing notice by the lessee of intention to begin or resume such operations: *Provided,* That whenever it appears from facts adduced by or furnished to him that the interests of the lessor require additional drilling or producing operations, the supervisor may require by notice in writing the beginning or resumption of such operations.

§ 221.16 *Enforcement.* The supervisor shall enforce the regulations in this part, and his orders issued pursuant thereto by action provided for in §§ 221.53 and 221.54 whenever, in his judgment, such action is necessary or advisable.

§ 221.17 *Appeals action.* The supervisor shall receive and promptly render his decision on any matter presented for reconsideration pursuant to § 221.68, and shall receive and promptly transmit for review all appeals pursuant to said § 221.68, together with his report in the premises.

REQUIREMENTS FOR ALL LESSEES (INCLUDING DESIGNATED OPERATORS)

§ 221.18 *Lease terms, regulations, instructions of supervisor, waste, damage, safety, and bond.* The lessee shall comply with the terms of the lease, and of the regulations in this part and any amendments thereof, and with the written instructions of the supervisor, shall take all reasonable precautions to prevent waste, damage to formations or deposits containing oil, gas, or water or to coal measures or other mineral deposits, and injury to life or property, and before drilling or other operations are started, shall have submitted a satisfactory bond.

§ 221.19 *Designated operator (or agent).* (a) In all cases where operations on a lease are not conducted by the record owner, but are to be conducted under authority of an operating agreement, an unapproved assignment, or other arrangement, a "designation of operator" shall be submitted to the supervisor, in a manner and form approved by the supervisor, prior to commencement of operations. If the designation of operator form cannot be obtained from the lessee without undue inconvenience to the operator, the supervisor in his discretion may accept in lieu thereof a valid operating agreement approved by the Secretary. A designation of operator will be accepted as authority of operator or his local representative to fulfill the obligations of the lessee and to sign, as operator, any papers or reports required under the regulations in this part. It will rest in the discretion of the supervisor to determine how a local representative of the operator empowered to act in whole or in part in his stead shall be identified.

(b) If the designated operator shall at any time be incapacitated for duty or absent from his designated address, the operator or the lessee shall designate in writing a substitute to serve in his stead, and, in the absence of such operator or of notice of the appointment of a substitute, any employee of the lessee who is on the leased lands or the contractor or other person in charge of operations will be considered the agent of the lessee for the service of orders or notices and service in person or by ordinary mail upon any such employee, contractor, or other person will be deemed service upon the operator and the lessee. All changes of address and any termination of the operator's authority shall be immediately reported, in writing, to the supervisor or his representative. In case of such termination or of controversy between the lessee and the designated operator, the operator, if in possession of the leasehold will be required to protect the interests of the lessor.

§ 221.20 *Well-location restrictions.* (a) The lessee shall not drill any well within 200 feet of any of the outer boundaries of the leased lands except where necessary to protect those lands against wells on land the title to which is not held by the lessor, and then only on consent first had in writing from the supervisor: *Provided,* That for good cause shown in any particular case, and where not prohibited by law, a lessee may be relieved of such restrictions on written consent of the supervisor. The lessee shall not drill any well within 200 feet of the boundary of any legal subdivision without first submitting adequate reasons therefor and obtaining consent in writing from the supervisor, such consent to be subject to such conditions as may be prescribed by said official.

(b) Lessees of Indian lands shall not drill any well within 200 feet of any house or barn standing on the leased lands without the lessor's written consent, approved by the officer in charge and the superintendent.

§ 221.21 *Well-spacing and well-casing program, well operations, required offsets, diligence, compensation in lieu of drilling.* (a) When required by the supervisor, the lessee shall submit an acceptable well-spacing and well-casing program for the lease or area. Such program must be approved by the supervisor and may be modified from time to time as conditions warrant, with the consent and approval of the supervisor.

(b) The lessee shall not begin to drill, redrill, repair, deepen, plug back, shoot, or plug and abandon any well, make water shut-off or formation test, alter the casing or liner, stimulate production by vacuum, acid, gas, air, water injection, or any other method, change the method of recovering production, or use any formation or well for gas storage or water disposal without first notifying the supervisor of his plan and intention and receiving written approval prior to commencing the contemplated work. The approval by the supervisor of a drilling plan does not constitute a determination or opinion that the lessee will be entitled to an extension of his lease under any extension provisions of the public-land or acquired lands mineral leasing laws if he carries out his plan.

(c) The lessee shall drill diligently and produce continuously from such wells as

D-8

are necessary to protect the lessor from loss of royalty by reason of drainage, or, in lieu thereof, with the consent of the supervisor, he must pay a sum estimated to reimburse the lessor for such loss of royalty, the sum to be computed monthly by the supervisor.

(d) The lessee, whenever drilling or producing operations are suspended for 24 hours or more, shall close the mouth of the well with a suitable plug or other fittings acceptable to the supervisor.

§ 221.22 *Well designations, property boundaries, markers for abandoned wells.* The lessee shall mark each and every derrick or well in a conspicuous place with his name or the name of the operator, the serial number of the lease or the name of the lessor if on Indian land, and the number and location of the well, and shall take all necessary means and precautions to preserve these markings. All abandoned wells shall be marked with a permanent monument, on which shall be shown the number and location of the well, unless this requirement is waived in writing by the supervisor. This monument shall consist of a piece of pipe not less than 4 inches in diameter and not less than 10 feet in length, of which 4 feet shall be above the general ground level, the remainder being embedded in cement. The top of the pipe must be closed with a screw cap, cement plug, or by other approved means.

§ 221.23 *Well records and reports, plats and maps, samples, tests, and surveys.* (a) The lessee shall keep on the leased lands or at his headquarters in the field, or otherwise conveniently available to the supervisor, accurate and complete records of the drilling, redrilling, deepening, repairing, plugging, or abandoning of all wells and of all other well operations, and of all alterations to casing. These records shall show all the formations penetrated, the content and character of oil, gas, or water in each formation, and the kind, weight, size, and landed depth of casing used in drilling each well on the leased lands, and any other information obtained in the course of well operations.

(b) Within 15 days after the completion of any well and within 15 days after the completion of any further operations on it, the lessee shall transmit to the supervisor copies of these records on forms furnished by the supervisor. (For reports to be made by all lessees or their designated operators, see §§ 221.57 to 221.65.)

(c) The lessee shall take such samples and make such tests and surveys as may be required by the supervisor with a view to determining conditions in the well and obtaining information concerning materials (formations) drilled and shall furnish such characteristic samples of each formation or substance, or reports thereon, as may be requested by the supervisor. The lessee shall gage the production of oil, gas, and water from individual wells continuously or at reasonably frequent intervals to the satisfaction of the supervisor.

(d) The lessee shall also submit in duplicate such other reports and records of operations as may be required and in the manner and form prescribed by the supervisor.

(e) Upon request and in the manner and form prescribed by the supervisor the lessee shall furnish a copy of the daily drilling report, a plat showing the location, designation, and status of all wells on the leased lands, together with such other pertinent information as the supervisor may require.

§ 221.24 *Precautions necessary in areas where high pressures are likely to exist.* When drilling in "wildcat" territory, or in any field where high pressures are likely to exist, the lessee shall take all necessary precautions for keeping the well under control at all times and shall provide at the time the well is started the proper high-pressure fittings and equipment; under such conditions the conductor string of casing must be cemented throughout its length, unless other procedure is authorized or prescribed by the supervisor, and all strings of casing must be securely anchored.

§ 221.25 *Cable tool drilling precautions.* When drilling with cable tools, the lessee shall provide at least one properly prepared slush pit, into which must be deposited mud and cuttings from clay or shale free of sand that will be suitable for the mudding of a well. When necessary or required, the lessee shall provide a second pit for sand pumpings and other materials obtained from the well during the process of drilling that are not suitable for mudding.

§ 221.26 *Rotary tool drilling precautions.* When drilling with rotary tools, the lessee shall provide, when required by the supervisor, an auxiliary mud pit or tank of suitable capacity and maintain therein a supply of mud having the proper characteristics for emergency use in case of blowouts or lost circulation.

§ 221.27 *Vertical drilling.* The lessee shall drill substantially vertical wells, material deviation from the vertical being permitted only on written approval of the supervisor and where interests in other properties will not be unfairly affected.

§ 221.28 *Water shut-offs; formation tests.* (a) By approved methods, the lessee shall shut off and exclude all water from any oil- or gas-bearing stratum to the satisfaction of the supervisor, and to determine the effectiveness of such operations, the lessee shall make a casing and a water shut-off test before suspending drilling operations or drilling into the oil or gas sand and completing the well.

(b) The lessee shall test for commercial productivity all formations that give evidence of carrying oil or gas, the test to be made to the satisfaction of and in a manner approved in advance by the supervisor. Unless otherwise specifically approved by the supervisor, formation tests shall be made at the time the formations are penetrated and in the absence of excessive back pressure from a column of water or mud fluid. Records of such tests shall be furnished in duplicate.

§ 221.29 *Protection of upper productive strata.* The lessee shall not deepen an oil or gas well for the purpose of producing oil or gas from a lower stratum until all upper productive strata are protected to the satisfaction of the supervisor.

§ 221.30 *Open flows and control of "wild" wells.* The lessee shall take reasonable precautions to prevent any oil, gas, or water well from blowing open, or "wild", and shall take immediate steps and exercise due diligence to bring under control any such well or burning oil or gas well.

§ 221.31 *Emulsion and dehydration.* The lessee shall complete and maintain his wells in such mechanical condition and operate them in such manner as to prevent, as far as possible, the formation of emulsion, or so-called B. S., and the infiltration of water. If the formation of emulsion, or B. S., or the infiltration of water, cannot be prevented or, if all or any part of the product is unmarketable by reason thereof or on account of any impurity or foreign substance, the lessee shall put into marketable condition, if commercially feasible, all products produced from the leased land and pay royalty thereon without recourse to the lessor for deductions on account of costs of treatment or of cost of shipping. To avoid excessive losses from evaporation, oil shall not be heated to temperatures above the minimum required to put the oil into marketable condition. If excessive temperatures are required to break down an emulsion, then other means of dehydration must be utilized. Under such circumstances the supervisor must be consulted, and his approval obtained

§ 221.32 *Pollution and surface damage.* The lessee shall not pollute streams or damage the surface or pollute the underground water of the leased or other land. If useless liquid products of wells cannot be treated or destroyed or if the volume of such products is too great for disposal by usual methods without damage, the supervisor must be consulted, and the useless liquids disposed of by some method approved by him.

§ 221.33 *Gaging and storing oil.* All production run from leased lands shall be gaged or measured according to methods approved by the supervisor The lessee shall provide tanks located on the leasehold, unless otherwise approved by the supervisor suitable for containing and measuring accurately all crude oil produced from the wells and shall furnish to the supervisor at least two acceptable positive copies of 100 percent-capacity tank tables. Meters for measuring oil must be first approved by the supervisor, and tests of their accuracy shall be made when directed by that official. The lessee shall not, except during an emergency and except by special permission of the supervisor, confirmed in writing, permit oil to be stored or retained in earthen reservoirs or in any other receptable in which there may be undue waste of oil.

§ 221.34 *Well abandonment.* (a) The lessee shall promptly plug and abandon or condition as a water well any well on the leased land that is not used or useful for the purposes of the lease, but no productive well shall be abandoned until its lack of capacity for further profitable production of oil or gas has been demonstrated to the satisfaction of the supervisor. Before abandoning a well the lessee shall submit to the supervisor a statement of reasons for abandonment and his detailed plans for carrying on the necessary work, together with duplicate copies of the log, if it has not already been submitted. A well may be abandoned only after receipt of written approval by the supervisor, in which the manner and method of abandonment shall be approved or prescribed. Equipment shall be removed and premises at the well-site shall be properly conditioned immediately after plugging operations are completed on any well.

(b) In case the lessee of lands of the United States strikes water while drilling, instead of oil or gas, and the water is of sufficient quantity and suitable quality to be valuable and usable at a reasonable cost, the Secretary may take over the well as provided in section 40 of the Mineral Leasing Act approved June 16, 1934, 48 Stat. 977, 30 U. S. C. 229a. If a satisfactory agreement is reached, the lessee may condition the well for a water well in lieu of plugging and abandonment.

(c) Drilling equipment shall not be removed from any suspended drilling well without first securing the written consent of the supervisor.

§ 221.35 *Waste prevention; beneficial use.* The lessee is obligated to prevent the waste of oil or gas and to avoid physical waste of gas the lessee shall consume it beneficially, or market it or return it to the productive formation. If waste of gas occurs the lessee shall pay the lessor the full value of all gas wasted by blowing, release, escape, or otherwise at a price not less than 5 cents for each 1,000 cubic feet, unless, on application by the lessee, such waste of gas under the particular circumstances involved shall be determined by the Secretary to be sanctioned by the laws of the United States and of the State in which it occurs. The production of oil and gas shall be restricted to such amount as can be put to beneficial use with adequate realization of values, and in order to avoid excessive production of either oil or gas, when required by the Secretary, shall be limited by the market demand for gas or by the market demand for oil.

§ 221.36 *Accidents and fires.* The lessee shall take all reasonable precautions to prevent accidents and fires, shall notify the supervisor within 24 hours of all accidents or fires on the leased land, and shall submit a full report thereon within 15 days.

§ 221.37 *Workmanlike operations.* The lessee shall carry on all operations and maintain the property at all times in a safe and workmanlike manner, having due regard for the preservation and the conservation of the property and for the health and safety of employees. The lessee shall take reasonable steps to prevent and shall remove accumulations of oil or other materials deemed to be fire hazards from the vicinity of well locations and lease tanks, and shall remove from the property or store in orderly manner all scrap or other materials not in use.

§ 221.38 *Sales contracts; division orders.* The lessee shall file with the supervisor triplicate (quadruplicate for production of restricted Indian lands or naval petroleum reserves) executed copies of all contracts for the disposition of all products of the leased land except that portion used for purposes of production on the leased land or unavoidably lost, and he shall not sell or otherwise dispose of said products except in accordance with a sales contract, division order, or other arrangement first approved, as provided in § 221.13. (See Appendix)

§ 221.39 *Relief from operating, royalty, and rental requirements.* Applications for any modification authorized by law of the operating requirements of a lease for lands of the United States shall be filed in triplicate (quintuplicate for applications involving leases for lands within the naval petroleum reserves) with the supervisor, and shall include a full statement of the circumstances that render such modification necessary or proper. Applications for any modification authorized by law of the royalty or rental requirements of a lease for lands of the United States shall be filed in triplicate in the office of the supervisor.

CROSS REFERENCE: For regulations of the Bureau of Land Management relating to royalty and rental relief, and suspension of operations and production, see 43 CFR Part 3100. (See Appendix)

§ 221.40 *Royalty and rental payments.* (a) When due in money, the lessee shall tender all payments of rental and royalty by check or draft on a solvent bank, or by money order drawn to the order of the appropriate receiving officer, in accordance with statements rendered by the supervisor pursuant to § 221.12, or in the case of public-land leases in accordance with instructions of the Bureau of Land Management.

(b) If the lessor elects to take royalty in oil or gas, unless otherwise agreed upon, such royalty shall be delivered on the leasehold, by the lessee to the order of and without cost to the lessor, as instructed by the supervisor. Upon the lessor's request, storage for royalty oil for 30 days after the end of the calendar month in which the royalty accrues, shall be furnished free of charge. Storage shall be provided on the leased lands or at a place mutually agreed upon by the supervisor and the lessee.

§ 221.41 *Surface rights on Indian lands.* Lessees of Indian land shall have only such surface rights as are specifically granted in the lease, but additional rights may be exercised under written agreement with the owner, such agreement to be subject to the prior approval of the superintendent of the Indian agency having jurisdiction. On demand of the supervisor, pipe lines on Indian land shall be buried below plow depth.

§ 221.42 *Costs or damages.* The lessee shall pay all costs or damages assessed under the provisions of the regulations in this part.

CROSS REFERENCES: For other liabilities of the lessee in case of default, see also §§ 221.53 to 221.56.

MEASUREMENT OF PRODUCTION AND COMPUTATION OF ROYALTIES

§ 221.43 *Measurement of oil.* The volume of production shall be computed in terms of barrels of clean oil of 42 standard United States gallons of 231 cubic inches each, on the basis of meter measurements (meter must be approved by supervisor), or tank measurements of oil-level differences, made and recorded to the nearest quarter inch of 100-percent-capacity tables, or with such greater accuracy as shall be required by the supervisor, and subject to the following corrections.

(a) *Correction for impurities.* The percentage of impurities (water, sand, and other foreign substances not constituting a natural component part of the oil) shall be determined to the satisfaction of the supervisor, and the observed gross volume of oil shall be corrected to exclude the entire volume of such impurities.

(b) *Temperature correction.* The observed volume of oil corrected for impurities shall be further corrected to the standard volume at 60° F. in accordance with table 2 of Circular C-410 of the National Bureau of Standards (March 4, 1936), or any revisions thereof and any supplements thereto, or any close approximation thereof approved by the supervisor.

(c) *Gravity determination.* The gravity of the oil at 60° F. shall be determined in accordance with table 1 of Circular C-410 of the National Bureau of Standards (March 4, 1936), or any revisions thereof and any supplements thereto.

(d) *Lease production, pipe-line runs.* For the convenience of the lessor and lessee, monthly statements of production and royalty shall be based in general on production recorded in pipe-line runs or other shipments. When shipments are infrequent or do not approximate actual production, the supervisor may require statements of production and royalty to be made on such other basis as he may prescribe, gains, or losses in volume of storage being taken into account when appropriate. Evidence of all shipments of oil shall be furnished by pipe-line or other run tickets signed by representatives of the lessee and of the purchaser who have witnessed the measurements reported and the determinations of gravity, temperature, and the percentage of impurities contained in the oil. Signed run tickets shall be filed with the supervisor within 5 days after the oil has been run.

§ 221.44 *Measurement of gas.* Gas of all kinds (except gas used for purposes of production on the leasehold or unavoidably lost) is subject to royalty, and all gas shall be measured by meter (preferably of the orifice-meter type) unless otherwise agreed to by the supervisor. All gas meters must be approved by the supervisor and installed at the expense of the lessee at such places as may be agreed to by the supervisor. For computing the volume of all gas produced, sold, or subject to royalty, the standard of pressure shall be 10 ounces above an atmospheric pressure of 14.4 pounds to the square inch, regardless of the atmospheric pressure at the point of measurement, and the standard of temperature shall be 60° F. All measurements of gas shall be adjusted by computation to these standards, regardless of the pressure and temperature at which the gas was actually measured, unless otherwise authorized in writing by the supervisor.

§ 221.45 *Determination of gasoline content of natural gas.* Tests to determine the gasoline content of gas delivered to plants manufacturing gasoline are required to check plant efficiency and to obtain an equitable basis for allocating the gasoline output of any plant to the several sources from which the gas treated is derived. The gasoline content of the gas delivered to each gasoline plant treating gas from leased lands shall be determined periodically by field tests, as required by the supervisor, to be made at the place and by the methods approved by him and under his supervision.

§ 221.46 *Quantity basis for computing royalties on natural gasoline, butane, propane, and other liquid hydrocarbon substances extracted from gas.* The primary quantity basis for computing monthly royalties on casing-head or natural gasoline, butane, propane, or other liquid hydrocarbon substances extracted from gas is the monthly net output of the plant at which the substances are manufactured, "net output" being defined as the quantity of each such substance that the plant produces for sale.

(a) If the net output of a plant is derived from the gas obtained from only one leasehold, the quantity of gasoline or other liquid hydrocarbon substances on which computations of royalty for the lease are based is the net output of the plant.

(b) If the net gasoline output of a plant is derived from gas obtained from several leaseholds producing gas of uniform gasoline content, the proportion of net output of gasoline allocable to each lease as a basis for computing royalty will be determined by dividing the amount of gas delivered to the plant from each leasehold by the total amount of gas delivered to the plant from all leaseholds.

(c) If the net gasoline output of a plant is derived from gas obtained from several leaseholds producing gas of diverse gasoline content, the proportion of net ouput of gasoline allocable to each leasehold as a basis for computing royalty will be determined by multiplying the amount of gas delivered to the plant from the leasehold by the gasoline content of the gas and dividing the arithmetical product thus obtained by the sum of the similar arithmetical products separately obtained for all leaseholds from which gas is delivered to the plant.

(d) If the net output of butane, propane, or other liquid hydrocarbon substances of a plant is derived from gas obtained from several leaseholds, the proportion of net output of such substances allocable to each leasehold as a basis for computing royalty will be determined by substituting the butane, propane, or other liquid hydrocarbon content for the gasoline content and following the method outlined in paragraph (b) or (c) of this section, whichever is applicable: *Provided,* That when in the judgment of the supervisor it is impracticable to test gas to determine the content of butane, propane, or other liquid hydrocarbon substances, the gasoline content will be used in determining the proportion of the net output of such substances allocable to each leasehold.

(e) The supervisor is authorized, whenever in his judgment neither method prescribed in paragraph (b) and (c) of this section is practicable, to estimate the production of natural gasoline, butane, propane, or other liquid hydrocarbon substances from any leasehold from (1) the quantity of gas produced from the leasehold and transmitted to the extraction plant, (2) the gasoline, butane, propane, or other liquid hydrocarbon content of such gas as determined by test, and (3) a factor based on plant efficiency or recovery and so determined as to insure full protection of the royalty interest of the lessor.

§ 221.47 *Value basis for computing royalties.* The value of production, for the purpose of computing royalty shall be the estimated reasonable value of the product as determined by the supervisor, due consideration being given to the highest price paid for a part or for a majority of production of like quality in the same field, to the price received by the lessee, to posted prices and to other relevant matters. Under no circumstances shall the value of production of any of said substances for the purposes of computing royalty be deemed to be less than the gross proceeds accruing to the lessee from the sale thereof or less than the value computed on such reasonable unit value as shall have been determined by the Secretary. In the absence of good reason to the contrary, value computed on the basis of the highest price per barrel, thousand cubic feet, or gallon paid or offered at the time of production in a fair and open market for the major portion of like-quality oil, gas, or other products produced and sold from the field or area where the leased lands are situated will be considered to be a reasonable value.

§ 221.48 *Royalty rates on oil; flat-rate leases.* The royalty on crude oil shall be the percentage (established by the terms of the lease) of the value or amount of the crude oil produced from the leased lands.

§ 221.49 *Royalty rates on oil; sliding- and step-scale leases (public land only).* Sliding- and step-scale royalties are based on the average daily production per well. The supervisor shall specify which wells on a leasehold are commercially productive, including in that category all wells, whether produced or not, for which the annual value of permissible production would be greater than the estimated reasonable annual lifting cost, but only wells which yield a commercial volume of production during at least part of the month shall be considered in ascertaining the average daily production per well. The average daily production per well for a lease is computed on the basis of a 28-, 29-, 30-, or 31-day month (as the case may be), the number of wells on the leasehold counted as producing and the gross production from the leasehold. (Tables for computing royalty on the sliding-scale and on the step-scale basis may be obtained upon application to the supervisor.) The supervisor will determine which commercially productive wells shall be considered each month as producing wells for the purpose of computing royalty in accordance with the following rules, and in his discretion may count as producing any commercially productive well shut-in for conservation purposes:

(a) For a previously producing leasehold, count as producing for every day of the month each previously producing well that produced 15 days or more during the month, and disregard wells that produced less than 15 days during the month.

(b) Wells approved by the supervisor as input wells shall be counted as producing wells for the entire month if so used 15 days or more during the month and shall be disregarded if so used less than 15 days during the month.

(c) When the initial production of a leasehold is made during the calendar month, compute royalty on the basis of producing well-days.

(d) When a new well is completed for production on a previously producing leasehold and produces for 10 days or more during the calendar month in which it is brought in, count such new wells as producing every day of the month, in arriving at the number of producing well-days. Do not count any new well that produces for less than 10 days during the calendar month.

(e) Consider "head wells" that make their best production by intermittent pumping or flowing as producing every day of the month, provided they are regularly operated in this manner, with approval of the supervisor.

(f) For previously producing leaseholds on which no wells produced for 15 days or more, compute royalty on a basis of actual producing well-days.

(g) For previously producing leaseholds on which no wells were producing during the calendar month but from which oil was shipped, compute royalty at the same royalty percentage as that of the last preceding calendar month in which production and shipments were normal.

(h) Rules for special cases not subject to definition, such as those arising from averaging the production from two distinct sands or horizons when the production of one sand or horizon is relatively insignificant compared to that of the other, shall be made by the supervisor as need arises.

(i) (1) In the following summary of operations on a typical leasehold for the month of June, the wells considered for the purpose of computing royalty on the entire production of the property for the month are indicated.

Well No.	Record	Count (marked X)
1	Produced full time for 30 days	X
2	Produced for 26 days; down 4 days for repairs	X
3	Produced for 30 days; down June 4, 12 hours, rods; June 14, 6 hours, engine down; June 22, 24 hours; June 23, 24 hours, pulling rods and tubing	X
4	Produced for 12 days; down June 13 to 30	
5	Produced for 8 hours every other day (head well)	X
6	Idle producer (not operated)	
7	New well, completed June 17; produced for 14 days	X
8	New well, completed June 22; produced for 9 days	

(2) In this example there are eight wells on the leasehold, but wells 4, 6, and 8 are not counted in computing royalties. Wells 1, 2, 3, 5, and 7 are counted as producing for 30 days. The average production per well per day is determined by dividing the total production of the leasehold for the month (including the oil produced by wells 4 and 8) by 5, the number of wells counted as producing, and dividing the quotient thus obtained by the number of days in the month.

§ 221.50 *Royalty on gas.* The royalty on gas shall be the percentage established by the terms of the lease of the value or amount of the gas produced.

(a) Royalty accrues on dry gas, whether produced as such or as residue gas after the extraction of gasoline.

(b) If the lessee derives revenue on gas from two or more products, a royalty normally will be collected on all such products.

(c) For the purpose of computing royalty the value of wet gas shall be either the gross proceeds accruing to the lessee from the sale thereof or the aggregate value determined by the Secretary of all commodities, including residue gas, obtained therefrom, whichever is greater.

§ 221.51 *Royalty on casing-head or natural gasoline, butane, propane, or other liquid hydrocarbon substances extracted from gas.* The royalty as provided in the lease shall be paid on the value of one-third (or the lessee's portion if greater than one-third) of all casing-head or natural gasoline, butane, propane, or other liquid hydrocarbon substances extracted from the gas produced from the leasehold. The value of the remainder is an allowance for the cost of manufacture, and no royalty thereon is required. The value shall be so determined that the minimum royalty accruing to the lessor shall be the percentage established by the lease of the amount or value of all extracted hydrocarbon substances accruing to the lessee under an arrangement, by contract or otherwise, for extraction and sale that has been approved by the supervisor:

(a) When a minimum price established by the Secretary is used in determining the value of natural gasoline accruing to the lessee, the volume of such gasoline may be corrected when deemed necessary by the supervisor to such standard and by such method as may be approved by the supervisor, in order that volumetric differences between natural gasolines of various specifications may be equitably adjusted.

(b) The present policy is to allow the use of a reasonable amount of dry gas for operation of the gasoline plant, the amount allowed being determined or approved by the supervisor, but no allowance shall be made for boosting residue gas, or other expenses incidental to marketing.

§ 221.52 *Royalty on drip gasoline or other natural condensate.* The royalty on all drip gasoline, or other natural condensate recovered from gas produced from the leased lands without resort to manufacturing process shall be the same percentage as provided in the lease for other oil, except that such substance, if processed in a casing-head gasoline plant shall be treated for royalty purposes as though it were gasoline.

PROCEDURE IN CASE OF DEFAULT BY LESSEE

§ 221.53 *Shutting down operations; lease cancelations.* The supervisor has authority to shut down any operation and place under seal any property or equipment for failure to comply with the oil and gas operating regulations in this part or orders issued under this part, to enter upon any leasehold and perform any operation that the lessee fails to perform when ordered so to do in writing, and to recommend cancelation of the lease and forfeiture under the bond for noncompliance with the applicable law, lease terms, and regulations.

§ 221.54 *Liquidated damages.* Administrative costs arising out of certain defaults or violations of orders requiring the performance of certain duties by lessees, as set forth in the regulations in this part constitute loss or damage to the United States the amount of which is difficult or impracticable of ascertainment. Therefore, the following amounts shall be deemed to cover such loss or damage and shall be payable upon receipt of notice from the oil and gas supervisor of such loss or damage: *Provided*, That as to paragraph (f) of this section the specified loss or damage shall be applicable to each week or fraction thereof during which the violation continues and as to paragraph (h) of this section the specified loss or damage shall be applicable to each day or fraction thereof during which the violation continues:

(a) For failure to perform any operation ordered in writing by the supervisor, if said operation is thereafter performed by or through the supervisor, the actual cost of performance thereof and an additional 25 percent to compensate the Government for administrative costs.

(b) For failure to maintain inviolate any seal placed upon any property or equipment by the supervisor, $50 for each such violation.

(c) For failure to file notice of intention and to obtain approval before starting to drill, or for failure to file notice and obtain approval before making any changes in the originally approved notice of intention, $25 for each violation.

(d) For failure to file notice and to obtain approval before repairing, redrilling, deepening, plugging-back, plugging, or abandoning any well, in pulling or altering casing, stimulating production by vacuum, acid, or shot, or gas, air, or water injection, or using any well or formation for gas storage or water disposal, $25 for each violation.

(e) For failure to mark wells or derricks, $10 for each violation.

(f) For failure to install required high-pressure fittings and equipment, to cement conductor string, or to anchor properly all strings of casing, $50 for each violation.

(g) For failure to construct and maintain in proper condition slush or mud pits, $10 for each violation.

(h) For failure to comply with § 221.32, $25 for each violation.

(i) For failure to file sales contracts or division orders as required by lease terms, $25 for each violation, and for failure to submit pipe-line run tickets, or other proper evidence of disposal as required by these regulations, $10 for each violation.

(j) For failure to file the following reports within the time specified in the regulations in this part, or within such other time designated in writing by the supervisor, $10 for each violation:

(1) Log of well, subsequent report of drilling, redrilling, deepening, plugging-back, plugging and abandonment, making water shut-off or formation test, stimulating production by acid or shot.

(2) Lessee's Monthly Report of Operations. Daily Report of Gas-Producing Wells, when required. Lessee's Statement of Oil and Gas Runs and Royalties.

(3) Special forms or reports as required by the supervisor.

§ 221.55 *Payment of damages.* (a) Payment or request for payment for any of the damages assessed for administrative costs under the regulations in this part shall not relieve the lessee from compliance with the provisions of the regulations in this part, or for liability for waste or any other damage. A waiver of any particular cause for the payment of damages shall not be construed as precluding the assessment of damages for any other cause herein specified or for the same cause occurring at any other time.

(b) Damages shall be paid in the manner and as directed by the supervisor.

§ 221.56 *Damages to Indian property.* Damage to lands, crops, buildings, and other improvements on Indian land shall be assessed by the superintendent and payments for such damages shall be made to the superintendent.

REPORTS TO BE MADE BY ALL LESSEES (INCLUDING OPERATORS)

§ 221.57 *General requirements.* Information required to be submitted in accordance with the regulations in this part shall be furnished in the manner and form prescribed in the regulations in this part or as directed by the supervisor. Prescribed standard forms in general use are described in §§ 221.58–221.64. Copies of such forms can be obtained from the supervisor and must be filled out completely and filed punctually with that official. Failure of the lessee to submit the information and reports required herein constitutes noncompliance with the terms of the regulations in this part and is cause for the assessment of specific damages as prescribed by the regulations in this part and the cancelation of the lease.

§ 221.58 *Sundry notices and reports on wells (Form 9–331A Public; Form 9–331B Indian).* Forms 9–331A and 9–331B cover all notices of intention and all subsequent reports pertaining to individual wells except those for which special blanks are provided. The forms may be used for any of the purposes listed thereon, or a special heading may be inserted in the blank to adapt it for use for similar purposes. Any written notice of intention to do work or to change plans previously approved must be filed in triplicate, unless otherwise directed, and must reach the supervisor and receive his approval before the work is begun. The lessee is responsible for receipt of the notice by the supervisor in ample time for proper consideration and action. If, in case of emergency, any notice is given orally or by wire, and approval is obtained, the transaction shall be confirmed in writing as a matter of record. The following paragraphs illustrate some of the uses to which Forms 9–331A and 9–331B may be put and indicate the requirements with respect to each use.

(a) *Notice of intention to drill.* The notice of intention to drill a well must be filed with the supervisor and approval received before the work is begun. This notice must give the location, in feet, and direction from the nearest lines of established public survey; the altitude of the ground and derrick floor above sea level and how obtained; and the geologic name of the surface formation. Under the heading "Details of Work", the proposed drilling and casing plan should be outlined in detail. Essential information includes type of tools, proposed depth to which the well will be drilled, estimated depths to the top of important markers, estimated depths at which water, oil, gas, and mineral beds are expected, the proposed casing record, including the size and weight of casing, the depth at which each string is to be set, and the amount of cement and mud to be used. Information also shall be given relative to the drilling plan, such as making drill-stem tests, drilling in with oil, using reversed circulation, perforating opposite pays, using special types of mud in rotary drilling, coring at specified depths, and using electric logging together with any other information which may be required by the supervisor.

(b) *Notice of intention to change plans.* Where unexpected conditions necessitate any change in the plans of proposed work already approved, complete details of the changes must be submitted to the supervisor and approval thereof obtained before the work is undertaken.

(c) *Notice of date for casing and water shut-off test.* The protection and segregation of oil, gas, or water-bearing formations is an important item of conservation, and the supervisor will witness all casing and water shut-off tests. Notice must be filed with the supervisor in advance of the date on which the lessee expects to make such test. Later by agreement the exact time shall be fixed. The casing test and the test of water shut-off must be approved before further drilling can proceed. In the event of failure, casing must be repaired or replaced or recemented, whichever the conditions may require.

(d) *Subsequent report of casing and water shut-off test.* Within 15 days after making a casing or water shut-off test, the results of the test must be reported. The report must give complete and accurate details, amount of mud and cement used, lapse of time between running and cementing the casing and making the test, method of testing, and results.

(e) *Notice of intention to redrill, repair, or condition well.* Before repairing, deepening, or conditioning a well, a detailed written statement of the plan of work must be filed with the supervisor and approval obtained before the work is started. In work that affects only rods, pumps, or tubing, or other routine work, such as cleaning out to previous total depth, no report is necessary unless specifically required by the supervisor.

(f) *Subsequent report of redrilling, repairing, or conditioning.* Within 15 days after completion of the repair work a detailed report of work done and the results obtained should be filed. Such report shall show the amount of production of oil, gas, and water, both before and after the work is done, and shall also include a complete statement of the work accomplished and methods employed, including all dates.

(g) *Notice of intention to use explosive or chemicals.* Before using explosive or chemicals (shooting or acidizing) in any well, whether for increasing production or in drilling, repair, or abandonment, notice of intention shall be filed and approval obtained before the work is done. When such notice of intention forms a part of a notice of intention to redrill, repair, or abandon a well, the supervisor may accept such notice in lieu of a separate notice of intention to use explosive or chemicals. The notice of intention to use explosive or chemicals must be accompanied by the complete log of the well to date, provided the complete log has not previously been filed, and must state the object of the work to be done, the amount and nature of the material to be used, its exact location and distribution in the well by depths, the method of localizing its effects, and the name of the company that is to do the work. The notice shall also contain an accurate statement of the dates and daily production of oil, gas, and water from the well for each of the last preceding 10 producing days.

(h) *Subsequent report of use of explosive or chemicals.* After using explosive or chemicals in any well a subsequent report must be filed with the supervisor. This report shall be filed separately within 15 days after the work is done, unless such report is included in the log as a part of a report of other subsequent work done or as a part of an abandonment report any one of which shall have been filed within that period. The subsequent report of use of explosive or chemicals shall include a statement of the amount and the nature of the material used, its exact location and distribution in the well by depths, and the method used to localize its effects. The report shall also contain an accurate statement of the dates and daily production of oil, gas, and water for each of the last 10 producing days preceding the use of explosive or chemicals and a similar statement of production after the work is done. In addition, this report must include other pertinent information, such as the depth to which the well was cleaned out, the time spent in bailing and cleaning out, and any injuries to the casing or well.

(i) *Notice of intention to pull, perforate, or otherwise alter casing.* If any casing is to be pulled, perforated, or otherwise altered, notice of intention must be filed and approved before the work is started. Such notice must give full details of the contemplated work, stating fully what changes are intended and what results are anticipated. A notice of intention to perforate the casing shall state the conditions of the well that make such work desirable; whether it is to be ripped or shot, the depth, number, and size of shots, or if ripped, the depths of the rips proposed; the production of oil, gas, and water; and, if a log of the well has not already been filed, the notice should be accompanied by a duplicate copy of the log showing all casing seats as well as all water strata and all oil and gas shows.

(j) *Subsequent report of pulling, perforating, or otherwise altering casing.* If any casing has been pulled, perforated, or otherwise altered, the results of the work should be reported within 15 days after the completion of such work, stating exactly what was done and the results obtained, including any change in production. The report of perforating casing also should include the number, depth, and size of shots, the date shot, and who did the shooting. If ripped, the depths and number of rips should be stated. The production of oil, gas, and water obtained by the work should be shown.

(k) *Notice of intention to abandon well.* Before beginning abandonment work on any well, whether drilling well, oil or gas well, water well, or so-called dry hole, notice of intention to abandon shall be filed with the supervisor and approval obtained before the work is started. The notice must show the reason for abandonment and must be accompanied by a complete log, in duplicate, of the well to date, provided the complete log has not been filed previously, and must give a detailed statement of the proposed work, including such information as kind, location, and length of plugs (by depths), and plans for mudding, cementing, shooting, testing, and removing casing, as well as any other pertinent information.

(l) *Subsequent report of abandonment.* After a well is abandoned or plugged a subsequent record of work done must be filed with the supervisor. This report shall be filed separately within 15 days after the work is done. The report shall give a detailed account of the manner in which the abandonment or plugging work was carried out, including the nature and quantities of materials used in plugging and the location and extent (by depths) of the plugs of different materials; records of any tests or measurements made and of the amount, size, and location (by depths) of casing left in the well; and a detailed statement of the volume of mud fluid used, and the pressure attained in mudding. If an attempt was made to part any casing, a complete report of the methods used and results obtained must be included.

§ 221.59 *Log and history of well (Form 9-330).* The lessee shall furnish in duplicate, on Form 9-330, to the supervisor, not later than 15 days after the completion of each well, a complete and accurate log and history, in chronologic order, of all operations conducted on the well. If a log is compiled for geologic information from cores or formation samples, duplicate copies of such log shall be filed in addition to the regular log. Duplicate copies of all electric logs, temperature surveys, or direction surveys shall be furnished. The lessee shall require the drillers, whether using company labor or contract labor, to record accurately the depth, character, fluid content, and fluid levels, where possible, of each formation as it is penetrated, together with all other pertinent information obtained in drilling the well. The practice of compiling well logs from memory, after the work has been completed, will not be permitted.

§ 221.60 *Monthly report of operations (Form 9-329 Public; Form 9-329A Indian).* A separate report of operations for each lease must be made on Form 9-329 for public land and on Form 9-329A for Indian land, for each calendar month, beginning with the month in which drilling operations are initiated, and must be filed in duplicate with the supervisor on or before the 6th day of the succeeding month, unless an extension of time for the filing of such report is granted by the supervisor. The report on this form shall disclose accurately all operations conducted on each well during each month, the status of operations on the last day of the month, and a general summary of the status of operations on the leased lands, and the report must be submitted each month until the lease is terminated or until omission of the report is authorized by the supervisor. It is particularly necessary that the report shall show for each calendar month:

(a) The lease be identified by inserting the name of the United States land office and the serial number, or in the case of Indian land the lease number and lessor's name, in the space provided in the upper right corner.

(b) Each well be listed separately by number, its location be given by 40-acre subdivision (¼ ¼ sec. or lot), section number, township, range, and meridian;

(c) The number of days each well produced, whether oil or gas, and the number of days each input well was in operation be stated;

(d) The quantity of oil, gas, and water produced, the total amount of gasoline, and other lease products recovered, and other required information. When oil and gas, or oil, gas, and gasoline, or other hydrocarbons are concurrently produced from the same lease, separate reports on this form should be submitted for oil and for gas and gasoline, unless otherwise authorized or directed by the supervisor.

(e) The depth of each active or suspended well, and the name, character, and depth of each formation drilled during the month, the date each such depth was reached, the date and reason for every shut-down, the names and depths of important formation changes and contents of formations, the amount and size of any casing run since last report, the dates and results of any tests such as production, water shut-off, or gasoline content, and any other noteworthy information on operations not specifically provided for in the form.

(f) The footnote must be completely filled out as required by the supervisor. If no runs or sales were made during the calendar month, the report must so state.

§ 221.61 *Daily report of gas-producing wells (Form 9-352).* Unless otherwise directed by the supervisor, the readings of all meters showing production of natural gas from leased lands shall be submitted daily on Form 9-352, together with the meter charts. After a check has been had the meter charts will be returned.

§ 221.62 *Statement of oil and gas runs and royalties (Form 9-361 Public; Form 9-361A Indian).* When directed by the supervisor, a monthly report shall be made by the lessee in duplicate, on Form 9-361 or 9-361A, showing each run of oil, all sales of gas, gasoline, other lease products, and the royalty accruing therefrom to the lessor. When use of this form is required it must be completely filled out and sworn to.

§ 221.63 *Royalty and rental remittance (Form 9-614A Indian).* Form 9-614A, completely filled out and signed, shall be submitted to the supervisor in triplicate and shall accompany each remittance covering payments of royalty or rental on Indian lands.

§ 221.64 *Royalty and rental remittance (Form 11ND Naval Petroleum Reserves).* Form 11ND, completely filled out and signed, must accompany each remittance covering payments of royalty or rental on Naval Petroleum Reserves. The remittance and the original form shall be sent direct to the Property Accounting Officer, United States Navy, Bureau of Supplies and Accounts, Navy Department, Washington, D. C., and the duplicate and triplicate copies of the form shall be sent to the oil and gas supervisor.

§ 221.65 *Special forms or reports.* When special forms or reports other than those referred to in the regulations in this part may be necessary, instructions for the filing of such forms or reports will be given by the supervisor.

§ 221.66 *Appeals.* An appeal from any order issued under authority of the regulations in this part may be filed as hereinafter set forth in this section. Compliance with any such order shall not be suspended by reason of an appeal having been taken unless such suspension is authorized in writing by the Director, or the Secretary (dependent upon the officer with whom the appeal is pending), and then only upon a determination that such suspension will not be detrimental to the lessor or upon the submission and acceptance of a bond deemed adequate to indemnify the lessor from loss or damage.

(a) An appeal to the Director may be taken from any order of the supervisor by filing such appeal with the latter officer within 20 days after service of the order. The appeal shall incorporate or be accompanied by such written showing and argument on the facts and law as the appellant may deem adequate to justify reversal or modification of the order. All statements of facts must be made under oath.

(b) The supervisor shall transmit the appeal and accompanying papers to the Director with a full report and recommendations in the premises and that officer shall review the record and render such a decision in the case as he deems proper.

(c) An appeal from any decision of the Director may be taken to the Secretary within 30 days after service of the Director's decision. The appeal shall be accompanied by such written showing and argument on the facts and law as appellant may deem adequate to justify reversal or modification of the decision. Any statement of facts not submitted to the Director must be made under oath.

(d) Oral argument in any case pending before the supervisor, the Director, or the Secretary will be allowed on motion in the discretion of such officer and at a time to be fixed by him.

(e) The procedure for appeals involving leases for public land shall be followed for leases on the naval petroleum reserves and Indian land except that, with regard to the Naval Petroleum Reserves, the Director of Naval Petroleum Reserves, and with regard to Indian land, the Commissioner of Indian Affairs will exercise the functions vested in the Director.

§ 221.67 *Effective date; repeal of prior regulations.* The regulations in this part shall become effective on the 1st day of June 1942, and shall supersede the oil and gas operating regulations of November 1, 1936, as amended, 30 CFR, 1938 ed., 221.1 to 221.56, except as to leases and unit agreements in force and effect on June 1, 1942, to which the regulations in this part are not applicable.[1]

---

[1] Not applicable on said effective date to lands acquired under the act known as the Appalachian Forest Act of March 1, 1911, 36 Stat. 961, to lands in national parks, to lands withdrawn or reserved for military or naval uses or purposes, except naval petroleum reserves, or to lands within the Osage Indian Reservation.

APPENDIX

Title 30 Chapter II
GEOLOGICAL SURVEY

TITLE 30—MINERAL RESOURCES

Chapter II—Geological Survey, Department of the Interior

Part 223—Approval of Sales Agreements or Contracts Covering the Disposal of Oil and Gas Lease Products (Not Applicable to Indian or Naval Petroleum Reserve Lands)

Part 223 is revised to read as follows:

Sec.
223.1 What this part does.
223.2 Filing of contracts.
223.3 Contracts made pursuant to new form leases.
223.4 Contracts made pursuant to old form leases.
223.5 Requests for approval.
223.6 Pending contracts.
223.7 Appeals.

Authority: §§ 223.1 to 223.7 issued under R. S. 161, sec. 32, 41 Stat. 450, sec. 10, 61 Stat. 915, 5 U. S. C. 22, 30 U. S. C. 189, Sup. 359.

§ 223.1 *What this part does.* This part prescribes the procedure for the filing, and approval when required, of sales agreements or contracts made by lessees or their operators covering the disposal of products from oil and gas leases on public domain lands and acquired lands of the United States.

§ 223.2 *Filing of contracts.* Copies of all contracts or agreements, whether or not approval is required or requested as hereinafter provided, must be filed in duplicate with the oil and gas supervisor of the Geological Survey not later than 30 days after the effective date thereof.

§ 223.3 *Contracts made pursuant to new form leases.* On November 29, 1950, a new form of lease was adopted (Form 4-1158, 15 F. R. 8525), containing provisions whereby the lessee agrees that nothing in any contract or other arrangement made for the sale or disposal of oil, gas, natural gasoline, and other products of the leased land, shall be construed as modifying any of the provisions of the lease, including, but not limited to, provisions relating to gas waste, taking royalty in kind, and the method of computing royalties due as based on a minimum valuation and in accordance with the oil and gas operating regulations. A contract or agreement pursuant to a lease containing such provisions may be made without obtaining approval of the United States as lessor, but must be filed as provided in § 223.2.

§ 223.4 *Contracts made pursuant to old form leases.* (a) Old form leases are those containing provisions prohibiting sales or disposal of oil, gas, natural gasoline, and other products of the lease except in accordance with a contract or other arrangement approved by the Secretary of the Interior, or by the Director of the Geological Survey or his representative. A contract or agreement made pursuant to an old form lease may be made without obtaining approval if the contract or agreement either contains the substance of or is accompanied by the stipulation set forth in paragraph (b) of this section, signed by the seller (lessee or operator).

(b) The stipulation the substance of which must be included in the contract, or be made the subject matter of a separate instrument properly identifying the leases affected thereby, is as follows:

> It is hereby understood and agreed that nothing in the within contract or in any approval thereof shall be construed as affecting any of the relations between the United States and its lessee, particularly in matters of gas waste, taking royalty in kind and the method of computing royalties due as based on a minimum valuation and in accordance with the terms and provisions of the oil and gas operating regulations applicable to the lands covered by said contract.

(c) A contract or agreement not containing the substance of nor accompanied by the stipulation set forth in paragraph (b) of this section may, if the provisions thereof are otherwise acceptable, be approved by the oil and gas supervisor subject to the condition that nothing in such contract or agreement or in the approval thereof shall be construed as affecting any of the relations between the United States and its lessee, including, but not limited to, the matters enumerated in paragraph (b) of this section.

§ 223.5 *Requests for approval.* A contract or agreement coming within the provisions of § 223.3 or § 223.4 (a) may be approved by the oil and gas supervisor if request for approval is made by the seller and the provisions thereof are acceptable.

§ 223.6 *Pending contracts.* Contracts filed but not acted upon before the effective date of this revision shall be acted upon in accordance with the regulations as herein revised.

§ 223.7 *Appeals.* An appeal may be taken as provided in § 221.66 from any action of the oil and gas supervisor under the regulations in this part.

OSCAR L. CHAPMAN,
Secretary of the Interior.

SEPTEMBER 27, 1951.

[F. R. Doc. 51-12377; Filed, Oct. 12, 1951; 8:53 a. m.]

DEPARTMENT OF THE INTERIOR

Title 43, Code of Federal Regulations

Chapter II—Bureau of Land Management, Department of the Interior

Part 3100—PUBLIC DOMAIN LEASING UNDER 1920 ACT

Subpart 3102—Fees and Rentals

*****

§ 3102.2 Payment of rentals.

(a) Unless otherwise directed by the Secretary, rentals and royalties under all leases and permits issued under the act shall be paid to the Manager of the appropriate land office. All remittances to Bureau of Land Management offices shall be made payable to the Bureau of Land Management.

(b) All rentals and royalties on producing oil and gas leases, communitized leases in producing well units, unitized leases in producing unit areas, leases on which compensatory royalty is payable, and all payments under subsurface storage agreements and easements for directional drilling are to be paid to the Regional Oil and Gas Supervisor of the United States Geological Survey. Rentals and royalties on producing mining leases are to be paid to the Regional Mining Supervisor. All remittances to Survey offices shall be made payable to the United States Geological Survey.

§ 3102.3 Waiver, suspension, or reduction of rental or minimum royalty.

(a) In order to encourage the greatest ultimate recovery of coal, phosphate, potassium, sodium, oil shale, oil, or gas and sulphur, and in the interest of conservation, the Secretary of the Interior whenever he determines it necessary to promote development or finds that the leases cannot be successfully operated under the terms provided therein may waive, suspend, or reduce the rental or minimum royalty or reduce the royalty on an entire leasehold, or on any deposit, tract, or portion thereof segregated for royalty purposes.

(b) An application for any of the above benefits shall be filed in triplicate in the office of the oil and gas supervisor for oil and gas leases or the office of the mining supervisor for coal, phosphate, potassium, sodium, oil shale and sulphur leases. It must contain the serial number of the leases, the land office name, the name of the record title holder and operator or sublessee and the description of the lands by legal subdivision.

(1) Each application involving oil or gas shall show the number, location, and status of each well that has been drilled, a tabulated statement for each month covering a period of not less than six months prior to the date of filing the application of the aggregate amount of oil or gas subject to royalty computed in accordance with the oil and gas operating regulations, the number of wells counted as producing each month, and the average production per well per day.

(2) Each application involving coal, phosphate, potassium, sodium, oil shale and sulphur shall show the number and location of each mine, a map showing the extent of the mining operations, a tabulated statement of the minerals mined and subject to royalty for each month covering a period of not less than 12 months next prior to the date of filing of the application, and the average production per day mined for each month and complete information as to why the minimum production was not attained.

(c) Every application must contain a detailed statement of expenses and costs of operating the entire lease, the income from the sale of any leased products, and all facts tending to show whether the wells or mines can be successfully operated upon the royalty or rental fixed in the lease. Where the application is for a reduction in royalty full information shall be furnished as to whether royalties or payments out of production are paid to others than the United States, the amounts so paid and efforts made to reduce them. The applicant must also file agreements of the holders of the lease and of the royalty holders to a permanent reduction of all other royalties from the leasehold to an aggregate not in excess of one-half the Government royalties.

§ 3162.4 Suspension of operations and production.

(a) Applications by lessees for relief from the producing requirements or from all operating and producing requirements of mineral leases shall be filed in triplicate in the office of the regional oil and gas supervisor for oil and gas leases, and in the office of the regional mining supervisor for all other leases. By Departmental Order No. 2699 and Geological Survey Order No. 218 of August 11, 1952, the regional oil and gas supervisors and the regional mining supervisors are authorized to act on applications for suspension of operations or production or both filed pursuant to this section and to terminate suspensions of this kind which have been or may be granted. As to oil and gas leases, no suspension of operations and production will be granted on any lease in the absence of a well capable of production on the leasehold, except where the Secretary directs a suspension in the interest of conservation. Complete information must be furnished showing the necessity of such relief.

(b) The term of any lease will be extended by adding thereto any period of suspension of all operations and production during such term pursuant to any direction or assent of the Secretary.

(c) A suspension shall take effect as of the time specified in the direction or assent of the Secretary. Rental and minimum royalty payments will be suspended during any period of suspension of all operations and production directed or assented to by the Secretary, beginning with the first day of the lease month on which the suspension of operations and production becomes effective or, if the suspension of operations and production becomes effective on any date other than the first day of a lease month, beginning with the first day of the lease month following such effective date. The suspension of rental and minimum royalty payments shall end on the first day of the lease month in which operations or production is resumed. Where rentals are creditable against royalties and have been paid in advance, proper credit will be allowed on the next rental or royalty due under the lease.

(d) No lease shall be deemed to expire by reason of a suspension of either operations or production only, pursuant to any direction or assent of the Secretary.

(e) If there is a well capable of producing on the leased premises and all operations and production are suspended pursuant to any direction or assent of the Secretary, the commencement of drilling operations only will be regarded as terminating the suspension as to operations but not as to production, and as terminating the period of suspension to be added to the term of the lease as provided in paragraph (b) of this section and the period of suspension of rental and minimum royalty payments as provided in paragraph (c) of this section. However, as provided in paragraph (d) of thus section, the term of the lease will not be deemed to expire so long as the suspension of operations or production remains in effect.

(f) The minimum annual production requirements of a lease issued under the act for coal, phosphate, potassium, sodium, oil shale or sulphur shall be proerations and production is directed or granted by the Secretary of the Interior in the interest of conservation. The relief authorized under this section may also be obtained for any oil and gas leases included within an approved unit or cooperative plan of development and operation.

*****

Office of the Secretary

[Order 2583, Amdt. 8]

BUREAU OF LAND MANAGEMENT

DELEGATION OF AUTHORITY IN CONNECTION WITH LANDS AND RESOURCES

AUGUST 11, 1952.

Order No. 2583 is amended as follows:

PART 2—AUTHORITY IN SPECIFIED MATTERS

MINERALS

1. Section 2.41 is amended to read:

SEC. 2.41 *Mineral leasing; relief and suspensions.* With the concurrence of the Director Geological Survey, the waiver, suspension, or reduction of the rental or minimum royalty or the reduction of the royalty on an entire leasehold, or on any deposit, tract, or portion thereof segregated for royalty purposes.

JOEL D. WOLFSOHN,
Acting Secretary of the Interior.

[F. R. Doc. 52-9022; Filed, Aug. 15, 1952; 8:48 a. m.]

Office of the Secretary

GEOLOGICAL SURVEY

Delegation of Authority

The following material is a portion of the Departmental Manual and the numbering system is that of the Manual.

PART 220—GEOLOGICAL SURVEY

CHAPTER 4—MINERAL LEASING FUNCTIONS

220.4.1 *Delegation of authority.*

A. Functions relating to unit agreements. The Director, Geological Survey,

vested in the Secretary of the Interior under the Mineral Leasing Act of February 25, 1920, (41 Stat. 437) as amended (30 U.S.C., 181 et. seq.) to approve, in the interest of conservation, agreements which provide for cooperative or unit plans of development or operation.

B. *Functions relating to claimed discoveries of new oil or gas deposits.* The Director, Geological Survey, is authorized to act on applications for royalty benefits by reason of a claimed discovery of a new oil or gas deposit under the Act of August 8, 1946 (60 Stat. 950), and to determine whether a new oil or gas deposit has been discovered, and the effective date of such discovery.

C. *Determination of productive limits of a producing oil or gas deposit.* The Director, Geological Survey, is authorized to determine under the Act of August 8, 1946 (60 Stat. 950), the productive limits of a producing oil or gas deposit, as such limits existed on August 8, 1946, on his own initiative or on application by the holder of an oil and gas lease or his operator.

D. *Approval of crude oil exchange agreements.* The Director, Geological Survey, is authorized to give final approval to agreements providing for the exchange of crude oil purchased under the Act of July 13, 1946 (60 Stat. 533), and the regulations thereunder, 30 CFR 225.1 et seq., for other crude oil.

E. *Approval of communitization or drilling agreements.* The Director, Geological Survey, is authorized to give final approval to communitization or drilling agreements submitted for approval in accordance with 43 CFR 3121.3. The Director has redelegated to the regional oil and gas supervisors the authority delegated by this paragraph (27 F.R. 6395).

F. *Suspension of operations and production.* The Director, Geological Survey, may act for the Secretary of the Interior in finally approving applications for suspension of operations or production or both, filed pursuant to 43 CFR 3102.4 and 3222.6–2 and in terminating suspensions of this kind which have been or may be granted. (The Director has redelegated to the regional oil and gas supervisors and mining supervisors the authority delegated by this paragraph. Survey Orders 218, 17 F.R. 7513, and 218, Amendment 1, 20 F.R. 8427.)

G. *Oil and gas sales contracts.* The regional oil and gas supervisors of the Geological Survey may act for the Secretary of the Interior in finally approving oil and gas sales contracts and agreements filed pursuant to 30 CFR Part 223.

II. Definition of known geologic structures of producing oil and gas fields.

The Director, Geological Survey, is authorized to determine the boundaries of the known geologic structures of producing oil and gas fields under the Act of February 25, 1920 (41 Stat. 437), as amended (30 U.S.C., 181 et seq.).

220.4.2 *Appeals.* Any person aggrieved by any action of a regional oil and gas supervisor or a regional mining supervisor may appeal to the Director, Geological Survey, and from his decision to the Secretary of the Interior as provided in 30 CFR 221.60.

Geological Survey

REGIONAL OIL AND GAS SUPERVISORS

Delegation of Authority Regarding Unit Agreements

The following material is a portion of the Geological Survey Manual and the numbering system is that of the Manual, Part 220 Special Redelegations, Chapter 2, Conservation Division.

1D. *Delegation of authority with respect to functions relating to unit agreements.* (220 DM 2.1 and 220 DM 4.1A)

(1) *Authority redelegated.* The Regional Oil and Gas Supervisors are authorized to perform the following functions with respect to unit agreements approved under the authority of the Secretary of the Interior under section 5 (a)(1) of the Outer Continental Shelf Lands Act of August 7, 1953 (67 Stat. 462, 464; 43 U.S.C. sec. 1334(a)(1)) and under the Mineral Leasing Act of February 25, 1920 (41 Stat. 437), as amended (30 U.S.C., 181 et seq.):

(a) Approve unit agreements submitted in identical form to that previously approved by the Director, where there is sufficient commitment to the agreement to assure effective control of operations within the unit area.

(b) Approve expansion or contraction of a unit area where such expansion or contraction has previously received the preliminary approval of the Director.

(c) Approve an amendment of an approved unit agreement where the text of the amendment is identical to that previously approved by the Director and where the owners of sufficient interests in the unitized land have executed said

(d) Concur in the operator's description of the lands automatically eliminated from a unit area under the provisions of the unit agreement.

(e) Approve the selection or designation of unit operators.

(f) Grant extensions of time for drilling test wells.

(g) Approve the establishment or revision of participating areas.

(h) Approve payment of compensatory royalty for drainage from unitized lands.

(i) Take appropriate action on commitments of interests to a unit agreement which are filed subsequent to approval of the unit agreement.

(j) Approve a request for the termination of a unit agreement where such request conforms to the procedures set forth in the unit agreement.

ARTHUR A. BAKER,
Acting Director.

[F.R. Doc. 68-4443; Filed, Apr. 15, 1968; 8:45 a.m.]

Geological Survey

[Survey Order 213, Amdt. 1]

REGIONAL OIL AND GAS SUPERVISORS AND REGIONAL MINING SUPERVISORS

DELEGATION OF AUTHORITY WITH RESPECT TO SUSPENSION OF OPERATIONS AND PRODUCTION

Section 1 of Survey Order No. 213 is amended as follows:

SECTION 1. *Suspension of operations and production.* Pursuant to the authority contained in Order No. 2699 of August 11, 1952 (as amended), of the Secretary of the Interior, the regional oil and gas supervisors and the regional mining supervisors of the Geological Survey are hereby authorized to act on applications for suspension of operations or production or both, filed pursuant to 43 CFR 3102.4 and 3222.6-2 and to terminate suspensions of this kind which have been or may be granted.

Dated: November 3, 1955.

THOMAS B. NOLAN,
Acting Director, Geological Survey.

Approved;

CLARENCE A. DAVIS,
Acting Secretary of the Interior.

[F. R. Doc. 55-9081; Filed, Nov. 9, 1955; 8:47 a. m.]

HEADQUARTERS OFFICE

Address Chief, Branch Of Oil And Gas Operations
U.S. Geological Survey
5227 General Services Administration Bldg.
18th. & F Street, N.W.
Washington, D.C. 20242

REGIONAL OFFICES

Address Regional Oil & Gas Supervisor
U.S. Geological Survey

Alaska Region
Post Office Box 259
Room 214 Skyline Bldg.
218 E Street
Anchorage, Alaska 99501

Eastern Region
5221 General Services
Administration Bldg.
Washington, D.C. 20242

Gulf Coast Region
Suite 336
Imperial Office Bldg.
3301 N. Causeway Boulevard
Metairie, Louisiana 70002

Mid-Continent Region
4002 New Federal Bldg.
333 West 4th. Street
Tulsa, Oklahoma 74103

Northern Rocky Mountain Region
Post Office Box 400
203 Federal Bldg.
Casper, Wyoming 82601

Pacific Region
7744 Federal Bldg.
300 North Los Angeles Street
Los Angeles, California
90012

Southern Rocky Mountain Region
Drawer 1857
Federal Bldg. & U S Courthouse
Richardson Ave. At 5th. St.
Roswell, New Mexico 88201

DISTRICT OFFICES

Address District Engineer
U.S. Geological Survey

Lafayette District No.
Post Office Box 52289
239 Bendel Road
Lafayette, Louisiana 70501

Lafayette District No. 2
Post Office Box 52289
239 Bendel Road
Lafayette, Louisiana 70501

New Orleans District
Suite 322
Imperial Office Bldg.
3301 N. Causeway Boulevard
Metairie, Louisiana 70002

Holdenville District
Post Office Box 750
8 Federal Bldg.
Holdenville, Oklahoma
74848

Oklahoma City District
4321 Federal Courthouse &
Office Bldg.
Oklahoma City, Oklahoma
73102

Shreveport District
201 Oil & Gas Bldg.
323 Market Street
Shreveport, Louisiana
71101

Tulsa District
3415 New Federal Bldg.
333 West 4th.
Tulsa, Oklahoma 74103

Billings District
Post Office Box 2550
316 Federal Bldg.
Billings, Montana 59103

Casper District
Post Office Box 400
410 O & G Bldg.
Casper, Wyoming 82601

Denver District
6041 Federal Bldg. &
Courthouse
Denver, Colorado 80202

Great Falls District
Post Office Box 1215
Professional Bldg.
510 First Avenue North
Great Falls, Montana
59401

Newcastle District
Post Office Box 219
214 West Main
Masonic Temple Bldg.
Newcastle, Wyoming
82701

Rock Springs District
Post Office Box 1170
201 First Security Bank Bldg.
Rock Springs, Wyoming
82901

Salt Lake City District
8416 Federal Bldg.
125 South State Street
Salt Lake City, Utah 84111

Thermopolis District
Post Office Box 590
202 Federal Bldg.
Thermopolis, Wyoming
82443

Bakersfield District No. 1
309 Federal Bldg.
800 Truxtun Avenue
Bakersfield, California
93301

Bakersfield District No. 2
300 Federal Bldg.
800 Truxtun Avenue
Bakersfield, California
93301

Santa Barbara District
209 Post Office Bldg.
836 Anacapa Street
Santa Barbara,
California 93101

Artesia District
210 Carper Bldg.
105 South 4th. Street
Artesia, New Mexico
88210

Durango District
Post Office Box 1809
135 West 10th. Street
Jarvis Bldg.
Durango, Colorado 81301

Farmington District
Post Office Box 959
408 Petroleum Plaza
3535 East 30th. Street
Farmington, New Mexico
87401

Hobbs District
Post Office Box 1157
305 North Linam Street
Hobbs, New Mexico
88240

Geological Survey

REGIONAL OIL AND GAS SUPERVISORS

Delegation of Authority With Respect to Approval of Communitization or Drilling Agreements

SECTION 1. Approval of communitization or drilling agreements. The authority to give final approval to communitization or drilling agreements submitted for approval in accordance with 43 CFR 3121.3 which was delegated to the Director, Geological Survey by Departmental Order No. 2365 of October 8, 1947, is hereby redelegated to the Regional Oil and Gas Supervisors of the Geological Survey.

SEC. 2. Any person aggrieved by the action of a Regional Oil and Gas Supervisor may appeal to the Director of the Geological Survey and from his decision to the Secretary of the Interior pursuant to the provisions of 30 CFR 221.66.

THOMAS B. NOLAN,
Director, Geological Survey.

Approved: June 14, 1962.

STEWART L. UDALL,
Secretary of the Interior.

[F.R. Doc. 62-6567; Filed, July 5, 1962; 8:53 a.m.]

JUSTICE DEPARTMENT

Law Enforcement Assistance Administration

NAL ADVISORY COMMITTEE ON MINAL JUSTICE STANDARDS AND ALS, PRIVATE TASK FORCE

Meeting

Notice is hereby given of a correction in the location of a meeting previously announced in the FEDERAL REGISTER.

An ad hoc working committee of the Private Security Task Force to the National Advisory Committee on Criminal Justice Standards and Goals is scheduled to meet Friday and Saturday, August 22 and 23, 1975, in Philadelphia, Pennsylvania. The meeting is still scheduled to convene at 9:00 a.m. Friday August 22, in the East Conference Room, 12th Floor, I.N.A. Building, at 1600 Arch Street. The location of Saturday's portion of the meeting has been changed to the Citizens' Crime Commission Office, 12 South 12th Street, also in Philadelphia.

Discussion at this meeting will focus upon the area of private security personnel training and education. The meeting will be open to the public.

For further information, please contact: Mr. William T. Archey, Director, Policy Analysis Division, Office of Planning and Management, LEAA, U.S. Department of Justice, 633 Indiana Avenue, N.W., Washington, D.C. 20531. 202/376-3762.

GERALD H. YAMADA,
Attorney-Advisor,
Office of General Counsel.

Doc.75-31452 Filed 8-14-75;8:45 am]

DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

OUTER CONTINENTAL SHELF OFFSHORE, SOUTHERN CALIFORNIA

Availability of Final Environmental Impact Statement Regarding Proposed Oil and Gas Lease Sale

Pursuant to section 102(2)(C) of the National Environmental Policy Act of 1969, the Department of the Interior has prepared a final environmental impact statement relating to a proposed Outer Continental Shelf (OCS) general oil and gas lease sale of 297 tracts of submerged lands on the OCS offshore southern California.

The final environmental impact statement has been submitted to the Council on Environmental Quality and made available to government agencies and the public for review for a 30-day period from the date of availability. During this period, comments on any aspect of the final statement will be accepted and considered by the Department of the Interior. This comment period will overlap in part with the 60-day comment period for the OCS Programmatic FEIS. This is the last of three commenting periods provided by the Department of the Interior in the review of a site-specific en- mental impact statement for this proposed lease sale. The first two commenting periods were announced in the FEDERAL REGISTER editions of February 21, 1975 (40 F.R. 7692) (site-specific DEIS comment period from February 21 through May 23, 1975) and April 8, 1975 (40 F.R. 15917-15918) (comments on site-specific DEIS, and FEIS when issued, during 60-day OCS Programmatic FEIS comment period which commenced on July 11 and will extend through September 9, 1975).

Single copies of the final environmental statement can be obtained from the Office of the Manager, Pacific Outer Continental Shelf Office, Bureau of Land Management, 7663 Federal Building, 300 North Los Angeles Street, Los Angeles, California 90012, and from the Office of Public Affairs, Bureau of Land Management (130), Washington, D.C. 20240.

Copies of the final environmental statement will also be available for review in the main public libraries in various coastal cities in the sale area.

CURT BERKLUND,
Director,
Bureau of Land Management.

Approved:
STANLEY D. DOREMUS,
Deputy Assistant Secretary of the Interior.

AUGUST 1, 1975.

[FR Doc.75-21093 Filed 8-14-75;8:45 am]

Geological Survey

DISPOSAL OF PRODUCED WATER

Comments Requested

On May 13, 1975, the Geological Survey published in the FEDERAL REGISTER (Vol. 40, No. 93, pp. 20834-20835), a Notice which (1) suspended the performance dates prescribed in NTL-2 and NTL-2A; (2) advised of the intent to modify and combine the requirements of said Notices into a new NTL; and, (3) invited the submittal of written comments in that regard by July 15, 1975.

Written and oral comments received by the Geological Survey have been carefully considered in the preparation of a proposed new Notice. All written comments are on file with the Geological Survey. Certain of these comments have been adopted or essentially satisfied, and the Geological Survey has made other changes on its own motion. The principal changes are discussed below:

FORMAT. The format has been changed to incorporate all requirements for the disposal of produced water into a single Notice.

APPROVAL AUTHORITY. Approval of all applications and compliance enforcement has been made the responsibility of the District Engineer.

APPLICATIONS. The information to be submitted with the application for approval of each type disposal system has been specified.

DISPOSAL IN UNLINED PITS. The criteria under which the disposal of produced water in unlined pits will be permitted has been clarified.

TIME FOR COMPLIANCE. The compliance date has been extended to October 1, 1977.

Due to the number of changes in both format and content, the Geological Survey is soliciting written comments, suggestions, and objections concerning the requirements of the proposed Notice. Such comments are to be submitted to the Chief, Conservation Division, U.S. Geological Survey, Mail Stop 650, 12201 Sunrise Valley Drive, Reston, Virginia 22092, by September 12, 1975.

It is hereby certified that the economic and inflationary impacts of proposed Notice to Lessees and Operators, NTL-2B, have been carefully evaluated in accordance with OMB Circular A-107.

V. E. MCKELVEY,
Director.

[NTL-2B]

DISPOSAL OF PRODUCED WATER

NOTICE TO LESSEES AND OPERATORS OF FEDERAL AND INDIAN OIL AND GAS LEASES

This Notice supersedes NTL-2 and 2A dated ______, and March 1, 1975, respectively, and is issued pursuant to the authority prescribed in 30 CFR 221.4 and 221.32.

Lessees and operators of onshore Federal and Indian oil and gas leases or fee and State leases committed to federally-supervised unitized or communitized areas shall comply with the following requirements for the handling, storing, or disposing of water produced from oil and gas wells on such leases.

I. Disposal Requirements and Applications for Approval of Disposal Methods

By October 1, 1977, all produced water must be disposed of by (1) injection into the subsurface; (2) lined pits; or (3) by other acceptable methods. All such disposal methods must be approved in writing by the District Engineer. Any method of disposal which has not been approved as of October 1, 1977, will be considered as an incident of noncompliance and will be grounds for issuing a shut-in order until an acceptable manner of disposing of said water is provided and approved by the District Engineer.

No additional approval is required for facilities previously approved by the Geological Survey which involve the disposal of produced water into the subsurface or in lined surface pits. Likewise, no further approval is necessary for existing injection facilities utilized for pressure maintenance or secondary recovery operations.

Lessees and operators who are presently disposing of water in unlined surface pits must timely file applications with the District Engineer for approval of present or proposed disposal methods.

Supplement

Likewise, lessees and operators who are presently disposing of produced water in the subsurface or in lined surface pits ut approval of the Geological Sur- ust also file applications for ap- l thereof by the District Engineer. As a minimum, such applications must specify the method of disposal and provide information concerning the quantity, quality, and source of the produced water, i.e., the daily average volume and a water analysis which includes total dissolved solids, Ph, and the concentration of chlorides and sulphates. Additional information may be required by the District Engineer.

A. *Disposal in the Subsurface*

If approval is requested for subsurface disposal, the lessee or operator must also furnish information with respect to:

1. The injection formation and interval.
2. The quality of the fluids in the injection interval, i.e., total dissolved solids.
3. The size, weight, grade, and casing point of all casing strings, the size hole drilled to accommodate each string, the amount and type of cement used in cementing the separate strings, and the top of the cement behind each string.
4. The total and plugged back depth of the well.
5. The present or proposed method of completing the well for injection including the type and size of tubing and packer to be utilized, the setting depth of the packer, anticipated injection pressure, and information concerning orrosion inhibitor fluid which is to ed in the tubing-casing annulus. ans for monitoring the system to assure that injection is confined to the injection interval.

In order to be approved, subsurface disposal must be confined to formations which contain connate water of similar or poorer quality than the injected water. In general, it will be required that subsurface disposal be accomplished through tubing utilizing a packer which is designed to hold pressure from above and below. The packer should be set at a depth where the casing is protected by competent cement but usually not more than 50 feet above the injection interval. Other procedures or methods of subsurface disposal may be approved by the District Engineer when justified by the lessee or operator.

B. *Disposal in Lined Pits*

Where approval is requested for surface disposal in a lined pit, the lessee or operator must also supply information with respect to:

1. Size and location of pit.
2. Evaporation rate for the area compensated for annual rainfall.
3. Method for periodic disposal of precipitated solids.
4. Type of material to be used for lining the pit and the method of installation.
5. Method to be employed for the detection of leaks.

material used in lining pits must ervious, weather-resistant, and not subject to deterioration when contacted by hydrocarbons, aqueous acids, alkalis, fungi, or other substances likely to be contained in the produced water. Lined pits constructed after the issuance of this Notice must have an underlying gravel-filled sump and lateral system or other suitable devices for the detection of leaks. The District Engineer shall be provided an opportunity to inspect the leak detection system prior to the installation of the pit liner.

C. *Disposal in Unlined Pits*

Surface disposal into unlined pits will not be approved unless the lessee or operator can show by application that such disposal meets any of the following criteria:

1. The water to be disposed of does not contain more than 5,000 ppm of total dissolved solids on an annual weighted average basis, provided that such water does not contain objectionable or toxic levels of any constituent.
2. The volume of water to be disposed of per facility does not exceed five barrels per day or the quantity of dissolved solids does not exceed 600 pounds on a monthly basis, whichever is greater.

For the purpose of determining the total dissolved solids in produced water, the Geological Survey will use the following formula:

Pounds/Month = Parts/Million(PPM) × .00035 × Barrels/Month

3. That all, or a substantial part, of the produced water is being used for beneficial purposes. For example, produced water used for irrigation, livestock, or wildlife watering shall be considered as being beneficially used.
4. The specific method of disposal has been granted a surface discharge permit under the National Pollutant Discharge Elimination System (NPDES).
5. The water to be disposed of is not of poorer quality than the surface and subsurface water in the area which reasonably might be affected by such disposal.

Applications for approval of unlined surface pits must include the following additional information:

1. Size and location of the pit.
2. Evaporation rate for the area compensated for annual rainfall.
3. Percolation rate.
4. Where beneficial use is the basis for the application, written confirmation from the user(s). The water analysis submitted must also include the oil and grease content, temperature, chemical oxygen demand, and the concentration of other constituents which are toxic to animal, plant, or aquatic life.
5. If disposal is pursuant to an NPDES permit, a copy of the approved permit and the most recent "Discharge Monitoring Report."
6. Where an assertion is made that surface and subsurface fresh waters will not be affected by disposal in an unlined pit, the justification must include:

a. Analyses of all surface and subsurface waters in the area which might reasonably be affected by the proposed disposal.

b. Maps or plats showing the location of surface waters, fresh water wells, and existing water disposal facilities within two miles of the proposed disposal facility.

c. Reasonable geologic and hydrologic evidence showing that the proposed disposal method will not adversely impact on existing water quality or major uses of such waters, the depth of the shallowest fresh water aquifer in the area, and the presence of any impermeable barrier(s).

II. *General Requirements for Permanent Surface Pits*

Lined and unlined pits approved for water disposal shall:

1. Have adequate storage capacity to safely contain all produced water even in those months when evaporation rates are at a minimum.
2. Be constructed, maintained, and operated to prevent unauthorized surface discharges of water. Unless surface discharge is authorized, no siphon, except between pits, will be permitted.
3. Be fenced, when necessary, to prevent livestock or wildlife entry to the pit.
4. Be kept free from surface accumulations of liquid hydrocarbons by use of approved skimmer pits, settling tanks, or other suitable equipment.
5. Have a continuous embankment surrounding the pit to prevent entrance of surface water.

III. *Temporary Use of Surface Pits*

Unlined surface pits may be used for handling or storage of fluids used in drilling, redrilling, reworking, deepening, or plugging of a well provided that such facilities are promptly emptied and restored upon completion of the operations. Unless otherwise specified by the District Engineer, unlined pits may be used for well evaluation purposes for a period of 30 days.

Unlined pits may also be retained as temporary containment pits for use only in an emergency provided such pits have been approved by the District Engineer. Any emergency use of such pits shall be reported to the District Engineer as soon as possible and the pit shall be emptied and the liquids disposed of in an approved manner within 48 hours following its use, unless such time is extended by the District Engineer.

IV. *Disposal Facilities for New Wells*

With the approval of the District Engineer, produced water from wells completed after the issuance date of this Notice may be temporarily disposed of into unlined pits for a period of 30 days. During this period, an application for approval of the permanent disposal method along with all required water analysis and other information must be submitted for the District Engineer's approval. Failure to timely file an application within the time allowed will be considered an incident of noncompliance and will be grounds for issuing a shut-in order until the application is submitted. Disposal may be continued pending the District

Engineer's determination. Once the District Engineer has determined the proper method of disposal, the lessee or operator ve until October 1, 1977, or 60 days ing receipt of the District Engi s determination, whichever is the longer, in which to make any changes necessary to bring the disposal method into compliance.

V. *Unavoidable Delay*

A single extension of time not to exceed three months may be granted by the District Engineer where the lessee or operator conclusively shows by application that, despite the exercise of due care and diligence, he has been unable to timely comply with the requirements of this Notice, provided that such delay will not adversely affect the environment.

VI. *Reports*

All unauthorized discharges or spills from disposal facilities must be reported to the District Engineer in accordance with the provisions of NTL-3.

An annual report for each facility which includes the total volume disposed of during the reporting period and a current water analysis which provides the same type of information required for approval of the original application.

VII. *Compliance*

Compliance with this Notice does not relieve a lessee or operator of the responsibility for complying with more stringent applicable Federal or State water quality laws or regulations or with o written orders of the Geological

D

Area Oil and Gas Supervisor.

APPROVED: RUSSELL G. WAYLAND,
Chief, Conservation Division.

[FR Doc.75-21675 Filed 8-14-75;8:45 am]

GEOTHERMAL RESOURCES OPERATIONAL (GRO) ORDER NO. 4

Central and Western Regions

Notice is hereby given that pursuant to 30 CFR 270.2, the Chief, Conservation Division, U.S. Geological Survey, has approved GRO Order No. 4 for the Central and Western Regions.

The purpose of GRO Order No. 4 is to provide General Environmental Protection Requirements for geothermal resources operations in the Central and Western Regions.

The proposed Order was published in the FEDERAL REGISTER on January 28, 1975, (Vol. 40, No. 19, pages 4166-4168), with a solicitation for comments. All comments on the proposed Order were considered in preparing the final version of GRO Order No. 4. In addition, the Geological Survey, on its own motion, has revised some sections of the proposed Order to strengthen and clarify it.

Significant modifications made in the dra Order and the rationale for them s lows:

The introduction has been amended to reflect recent changes in the Freedom of Information Act (P.L. 89-487, as amended by P.L. 93-502), with respect to treatment of proprietary data submitted under this Order and to clarify the necessary acquisition of environmental baseline data one year prior to submission of a plan for production as required by 30 CFR 270.34(k).

Paragraph 2, LAND USE AND RECLAMATION, has been amended to consider vehicular traffic in environmentally fragile areas and temporary fencing, as needed, to facilitate revegetation in reclaimed areas.

Paragraph 4, RECREATION, has been amended to provide for the relocation of recreation sites and/or access routes thereto where such relocation is approved by the Supervisor with the concurrence of the Authorized Officer.

Paragraph 5, SLOPE STABILITY AND EROSION CONTROL, has been broadened to ensure that sites for wells and surface facilities in potentially unstable areas are designed by and constructed under the supervision of a qualified engineer or engineering geologist.

Paragraph 6, BIOTA, has been extensively revised and clarified with respect to soliciting expert advice and assistance from other Government agencies or private groups to detect adverse floral and faunal trends and to provide realistic mitigating measures. A section has been added which requires reasonable replacement of species or their habitat which are significantly damaged by a lessee's operations.

Paragraph 8, SUBSIDENCE AND SEISMICITY, has been broadened to include seismicity. The introduction has been reworded for clarification of surveying and data required.

Subparagraph 8B, BENCH MARKS, has been modified to include periodic resurveying of bench marks as necessary.

Subparagraph 8D, SEISMICITY, has been retitled and modified to require monitoring and remedial actions where production or injection results in induced seismicity.

Subparagraph 9A (1), LIQUID DISPOSAL, has been modified to allow liquid waste disposal by means other than injection if all applicable water quality standards are met.

Subparagraph 9A (3) has been retitled AIR QUALITY.

Subparagraph 9A (4), PITS AND SUMPS, has been reworded for clarification, and has been modified to require fencing of unattended pits and sumps when necessary to protect wildlife, livestock, and the public.

Subparagraph 9B (2), POLLUTION REPORTS, has been changed to eliminate distinction between "minor" and "substantial" spills, and now requires a uniform reporting procedure for all pollution incidents.

Subparagraph 9C (1), PLAN OF INJECTION, has been modified to eliminate the requirement that a lessee furnish a copy of his plan of injection to adjacent lessees.

Subparagraph 9C (3), INSPECTION, has been expanded to require the immediate cessation of injection operations in the event of an injection well failure which may damage surface or fresh water aquifers.

Paragraph 10, WATER QUALITY, has been clarified regarding water analysis requirements and to provide for a suspension of a production where a health hazard exists.

Subparagraph 11C, NOISE CRITERIA, has been clarified with respect to the conditions under which a noise level of 65 dB(A) may be exceeded.

It is hereby certified that the economic and inflationary impacts of Geothermal Resources Operational Order No. 4 have been carefully evaluated in accordance with OMB Circular A-107.

V. E. MCKELVEY,
Director.

UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY CONSERVATION DIVISION

Geothermal Resources Operational Order No. 4

Effective August 1, 1975

General Environmental Protection Requirements

This Order is established pursuant to the authority prescribed in 30 CFR 270.11 and in accordance with 30 CFR 270.2, 270.34(k), 270.37, 270.41, 270.42, 270.43, 270.44, and 270.76. Lessees shall comply with the provisions of this Order. All variances from the requirements specified in this Order shall be subject to approval pursuant to 30 CFR 270.42. References in this Order to approvals, determinations, or requirements are to those given or made by the Area Geothermal Supervisor (Supervisor) or his delegated representative.

All data submitted under this Order shall be available for inspection in accordance with the Freedom of Information Act of 1966 (P.L. 89-487), as amended in 1974 (P.L. 93-502), except information such as geological, geophysical, reservoir, trade secrets, and financial data and interpretations of such data, maps, and related files for which a lessee requests proprietary status, provided that such status is determined by the Supervisor to be warranted and is approved by appropriate officials of the Department of the Interior.

Protection of the environment includes the lessee's responsibility to: conduct exploration and development operations in a manner that provides maximum protection of the environment; rehabilitate disturbed lands; take all necessary precautions to protect the public health and safety; and conduct operations in accordance with the spirit and objectives of all applicable Federal environmental legislation and supporting executive orders.

Adverse environmental impacts from geothermal-related activity shall be prevented or mitigated through enforcement of applicable Federal, State, and local standards, and the application of exist-

October 21, 1974
December 31, 1974 Revision

UNITED STATES
DEPARTMENT OF THE INTERIOR
CONSERVATION DIVISION
PACIFIC AREA

NOTICE TO LESSEES AND OPERATORS OF PUBLIC DOMAIN ACQUIRED AND INDIAN OIL AND GAS LEASES
(NTL-3)

This notice is issued pursuant to the authority prescribed in 30 CFR 221.7 which provides as follows:

> "The supervisor shall prescribe the manner and form in which records of all operations, reports, and notices shall be made by lessees and operators."

Operators shall comply with the following reporting requirements:

POLLUTION REPORTS

The following incidents, when occurring on the subject leases, shall be reported to the appropriate District Engineer as soon as practical but within a maximum of 18 hours:

1. All surface discharges of pollutants (oil, saltwater, and other liquid, or combination thereof) in excess of 10 barrels;
2. All surface discharges of pollutants, regardless of size, which have entered or threaten to enter freshwater streams, lakes, ponds, navigable waters, or that occur in environmentally sensitive areas;
3. All blowouts (loss of control of any well);
4. All accidents involving life-threatening injuries or loss of life;
5. All fires or explosions which cause damage to property, equipment, loss of oil or gas, or result in injuries to personnel; and
6. All subsurface loss of production, or other contamination or pollution.

WRITTEN REPORTS

A written report shall be submitted in triplicate to the District Office no later than fifteen (15) days following the control or containment of any of the above incidents. Such reports shall provide information on:

1. The specific nature and cause of the incident;

2. The location where the incident occurred;

3. A description of the resultant damage and estimated volume of pollutant discharged;

4. The date and time of occurrence;

5. The length of time required to control the incident or contain the pollutants;

6. Actions that have been or will be taken to prevent recurrence of said incident;

7. Measures being taken to clean up pollutants;

8. The make or manufacturer, size, working and test pressure, date of installation, type of use, physical damage, etc. of any equipment causing or indirectly involved with the incident; and

9. Other Federal or State agencies notified of incident.

Spills of pollutants involving less than 10 barrels which have been contained and cleaned up without entering a freshwater stream, lake, or pond can be reported in writing without immediate verbal notification. Accidents not involving injury or loss of life may be reported in a similar manner. A sample reporting form is attached to this notice.

CONTINGENCY PLANS

A copy of any Spill Prevention Control and Countermeasure Plan (SPCC Plan) required by the (Federal) Environmental Protection Agency (EPA) under Part 112 of 40 CFR or other contingency plan must be submitted upon request of the appropriate District Engineer.

F. J. Schambeck December 31, 1974

F. J. Schambeck Date
Oil and Gas Supervisor
Pacific Area

Attached are a plat(s) and data showing District boundaries, office locations, addresses, and telephone numbers of District engineering personnel. (NOTE: Data to be compiled and attached by Area personnel.)

(Submit in triplicate)

To: District Engineer
U. S. Geological Survey
309 Federal Building
800 Truxton Avenue
Bakersfield, California 93301

From:

Subject: Pollution Report

Spill _____ Discharge _____ Blowout _____ Accident _____ Fire or Explosion _____

1. Specific Nature and Cause of Incident

2. Location of Incident

3. Description of Resultant Damage and Volume of Pollutant Discharged

4. Date and Time of Occurrence

5. Length of Time Required to Control Incident or Contain Pollutants

6. Action Taken to Prevent Recurrence

7. Measures Taken to Clean Up Pollutants

8. The make or manufacturer, size, working and test pressures, date of installation, type of use, physical damage, etc., of any equipment causing or directly involved with the incident

9. Other Federal or State Agencies Notified of Incident

Signature ______________________________ Date ______________

Title ______________________________

PACIFIC AREA

Bakersfield District Office:

U. S. Geological Survey
309 Federal Building
800 Truxton Avenue
Bakersfield, California 93301

Phone: 805-861-4186

Donald F. Russell, District Engineer
Home Phone: 805-871-4620

John P. Wagner, Assistant District Engineer
Home Phone: 805-872-2240

The Bakersfield District includes the states of Arizona, California, Idaho, Nevada, Oregon and Washington.

I th a State Multiple Use Advi- ory L will be held December 10 nd 11, 1975 at 8 a.m. at the Pioneer nn, 221 S. Virginia Street, Reno, levada.

The Nevada State Multiple Use Adviory Board was established to advise and ounsel the Bureau of Land Management nd the Secretary of the Interior on ational resource land management.

This will be the first meeting of the ewly appointed board under its charter pproved by the Secretary of the Interior on August 5, 1975. The purpose the meeting is to orient the board embers to BLM's programs, to elect ficers and to discuss necessary comittees. The following topics will be dissed during the meeting: Role and ornization of the board including comittees, current issues nationally and in evada, BLM Nevada district organition study, current legislation affecting e BLM and the board's perceptions of e BLM.

The meeting is open to the public. Inrested persons may make oral prestations to the board or file written atements. Such requests should be ade to the official listed below at least days prior to the meeting.

Further information concerning this eeting may be obtained from Carl A. dlund, Chief, Public Affairs Staff, Bueau of Land Management, Nevada State fice, 3008 Federal Building, 300 oth Reno, Nevada 89502, teleone 4-5459.

Minutes of the meeting will be availle for public inspection and copying ur weeks after the meeting at the Bueau of Land Management, Nevada State fice, Room 3041, Federal Building, 300 oth Street, Reno, Nevada 89502.

E. I. ROWLAND,
State Director, Nevada.

NOVEMBER 3, 1975.

[FR Doc.75-20242 Filed 11-10-75;8:45 am]

[OR 13853 (Wash.)]

WASHINGTON

Notice of Termination of Proposed Withdrawal and Reservation of Lands

OCTOBER 30, 1975.

Notice of an application Serial No. OR 353 (Wash.), for withdrawal and reservation of lands was published as FEDAL REGISTER Document No. FR 75-6093 page 12131 of the issue for March 17, 5. The applicant agency has cancelled application which involved the lands cribed below. Therefore, pursuant to regulations contained in 43 CFR 1.2-5(b), such lands will be at 10 a.m. December 5, 1975, relieved of the regative effort of the above-mentioned lication.

The l involved in this notice of mle re:

WILLAMETTE MERIDIAN

WENATCHEE NATIONAL FOREST

Liberty Historical District

T. 20 N., R. 17 E.,
  Sec. 1, portions of SW¼NW¼, SE¼NW¼, and NW¼SW¼;
  Sec. 2, portions of NE¼SE¼.
Further described as follows:
  Beginning at Corner No. 1, the ¼ Section Corner common to secs. 1 and 2, T. 20 N., R. 17 E.
  From Corner No. 1 by metes and bounds: N. 73° 57′ E., 1065.80 feet to Corner No. 2; N. 90° 00′ E., 346.54 feet to Corner No. 3; S. 0° 00′ E. 129.49 feet to Corner No. 4; S. 67° 30′ W., 256.95 feet to Corner No. 5; S. 24° 13′ W., 126.03 feet to Corner No. 6; S. 60° 35′ W., 1372.50 feet to Corner No. 7; N. 38° 53′ W., 291.00 feet to Corner No. 8; S. 61° 43′ W., 238.09 feet to Corner No. 9; S. 65° 04′ W., 307.23 feet to Corner No. 10; N. 0° 00′ E., 542.10 feet to Corner No. 11; N. 73° 57′ E., 703.97 feet to Corner No. 1; the place of beginning.

The area described contains approximately 23.76 acres in Kittitas County, Washington.

HAROLD A. BERENDS,
Chief, Branch of Lands and Minerals Operations.

[FR Doc.75-20244 Filed 11-10-75;8:45 am]

Geological Survey

[NTL-6]

FEDERAL AND INDIAN OIL AND GAS LEASES

Approval of Operations

Notice is hereby given that the Geological Survey proposes to formalize its procedures for approval of all applications for permits to conduct operational or construction activities on onshore Federal and Indian oil and gas leases. The proposed Notice also prescribes the information which a lessee or operator must submit in support of applications to conduct operations.

Interested parties may submit written comments, objections, and suggestions to the Chief, Conservation Division, U.S. Geological Survey, National Center, Mail Stop 650, 12201 Sunrise Valley Drive, Reston, Virginia 22092, on or before December 14, 1975.

It is hereby certified that the economic and inflationary impacts of proposed Notice to Lessees and Operators, NTL-6, have been carefully evaluated in accordance with OMB Circular A-107.

V. E. MCKELVEY,
Director.

NOTICE TO LESSEES AND OPERATORS OF FEDERAL AND INDIAN ONSHORE OIL AND GAS LEASES (NTL-6)

Pursuant to the National Environmental Policy Act of 1969 (83 Stat. 852), the Department of the Interior is charged with the responsibility of assuring that oil and gas operations on leased lands under its jurisdiction are conducted with due regard for the protection of the environment. Therefore, all operations which are conducted on onshore Federal and Indian oil and gas lease must conform to the requirements of this Notice as well as those contained in the lease and in the Oil and Gas Operating Regulations, Title 30 CFR Part 221.

I. GENERAL

In order that the environmental impact of proposed operations may be properly evaluated, all applications to conduct leasehold operations or construction activities must be accompanied by an appropriate surface use plan. As a minimum, such applications and surface use plans must provide a detailed description of the technical aspects of the proposed operation or activity, the magnitude of surface disturbance involved, and the procedures to be followed in rehabilitating the surface once the operation or construction activity has been completed. Specific requirements in this regard are set forth in Sections II(B), III, and V hereof. One copy of the surface use plan must be attached to each copy of the application to conduct operations or construction activities.

Applications to conduct operations or construction activities with attached surface use plans should be filed at least 30 days in advance of the contemplated starting date of any operation or construction activity in order to allow sufficient time in which to schedule and conduct, if necessary, a joint field inspection by appropriate personnel of the Geological Survey, the Federal surface management agency, the lessee or operator, and, if practical, the lessee's or operator's contractors and subcontractors who will perform the work. However, the early filing of an application is no guarantee that approval thereof will be granted within the 30-day period, as environmental considerations or current workload in the affected Federal agencies may result in further delay.

Lessees and operators have the responsibility to see that their exploration, development, production, and construction operations are conducted in a manner which (1) affords maximum safeguards for the environment; (2) results in the proper rehabilitation of disturbed lands; and, (3) assures the protection of the public health and safety. In that regard, lessees and operators will be held fully accountable for their contractors' and subcontractors' compliance with the applicable laws, regulations, and the requirements of the approved permit and surface use plan.

All approvals of proposed operations as well as subsequent instructions and regulation thereof will come from the District Engineer or Area Oil and Gas Supervisor of the Geological Survey. However, the Federal surface management agency will establish the rehabilitation requirements and will be available for consultation during rehabilitation operations. Names, addresses, and phone numbers of appropriate personnel of the Geological Survey and the Federal surfa anagement agency, as well as a surface use areas, will be furni he lessee or operator on its approved copy of the permit and surface use plan.

Lessees and operators, as well as their contractors and subcontractors, must not commence any operation or construction activity on a lease without the prior approval of the appropriate official of the Geological Survey. Likewise, the terms and conditions of an approved permit and surface use plan may not be altered unless the Geological Survey has approved an amended or supplemental permit and/or plan covering any such modifications. Approval of subsequent operations is addressed in Section V of this notice.

II. DRILLING OPERATIONS

A. PRELIMINARY ENVIRONMENTAL REVIEW

A preliminary environmental review will be required on all future drilling operations prior to entry on the ground for the purpose of staking the location, access roads, and other surface use areas. The lessee or operator, upon finalizing plans to drill but prior to the actual surveying, must file with the Geological Survey's District Engineer or Area Oil and Gas Supervisor and the appropriate office of the involved Federal surface management agency, a topographic map (or equivalent) of a scale not less than 1 inch = 1 mile which shows the preferred l n and the general topographic f in the area. This will permit the F surface management agency, prior to the lessee's or operator's expenditure of time and money for surveys, to review its records for any potential conflicts with other resource values. If conflicts are noted, a joint conference or field inspection, as appropriate, by the Geological Survey, the Federal surface management agency, and the operator may be scheduled to resolve problem areas.

B. APPLICATION FOR PERMIT TO DRILL

All drilling operations must be conducted in accordance with a permit or development plan which has the prior approval of the District Engineer or Area Oil and Gas Supervisor.

The permit or development plan filed for approval will consist of the application for permit to drill on Form 9-331C, and a multi-point surface use and operations plan. Where private surface is involved, it should also include a copy of the written agreement between the lessee or operator and the surface owner or a letter setting forth the rehabilitation requirements of the surface owner. The requirements for surface use and operations plans and the rehabilitation of private surface are contained in Sections III and VI, respectively, of this notice.

The application for permit to drill must provide information concerning (1) the location in feet and direction from rest lines of an established sur determined by a registered surveyor or engineer; (2) the elevation above sea level of the ground and derrick floor or rotary kelly bushing; (3) the geologic name of the surface formation; (4) the type of tools and other equipment to be utilized; (5) the proposed drilling depth; (6) the estimated tops of important geologic markers; (7) the estimated depths at which water, oil, gas, or other mineral deposits are expected to be encountered; (8) the proposed casing program including the size, grade, weight, and safety factors for collapse, tension, and burst of each string; (9) the proposed setting depth of each casing string and the amount and type of cement (including additives) and mud to be used; (10) the proposed pressure control equipment which is to be used and a schematic diagram thereof; (11) the type and characteristics of the proposed drilling medium or mediums to be employed; (12) the testing, logging, and coring programs to be followed; (13) any abnormal pressures or temperatures expected to be encountered or potential hazards such as hydrogen sulfide gas and plans for mitigating such hazards; (14) the anticipated starting date and duration of the operation; and, (15) any other facets of the proposed operation which are pertinent to the Geological Survey's consideration of the application. The District Engineer or Area Oil and Gas Supervisor may require additional information as warranted.

A copy of approved application for permit to drill and the accompanying surface use and operations plan shall be posted at the drillsite.

III. MULTI-POINT SURFACE USE AND OPERATIONS PLAN

A surface use and operations plan in sufficient detail to permit a complete appraisal of the environmental effects associated with the proposed project must be submitted, in triplicate, to the District Engineer or Area Oil and Gas Supervisor with the application for permit to drill.

The Geological Survey will send a copy of such plan to the Federal surface management agency. When possible, a preliminary field development plan or drilling schedule should also be submitted to allow lead time for evaluating environmental considerations, resource conflicts, and land use planning alternatives.

The plan shall in its context provide for and assure adequate protection of surface resources, other environmental components, and include adequate measures for reclamation of disturbed lands. The plan shall be developed in conformity with the provisions of the lease, attached stipulations, and the guidelines provided by this Notice. In developing the plan, the lessee or operator will make use of such information as is available from the Federal surface management agency concerning the surface resources, environmental considerations, and local reclamation procedures. The plan will be reviewed for adequacy by the Geological Survey and the Federal surface management agency. Approval of proposed activities that would result in irreparable or extensive damage to the environment will be withheld until the plan is modified, additional mitigating measures are provided, or alternatives to the proposed action are agreed upon.

A. GUIDELINES FOR THE PREPARATION OF SURFACE USE AND OPERATIONS PLANS

In the preparation of surface use and operations plans, lessees and operators should adhere closely to the following:

1. *Existing roads.* A legible map (USGS topographic or county road map of a scale not less than 1 inch = 1 mile) shall be used for locating the proposed well site in relation to a town or other locatable reference point. The proposed route to the location including appropriate distances from the reference point to the point where the access route exits the highway or county road shall be shown. All proposed access roads shall be appropriately labeled or color coded. Additionally, all existing roads within a radius of three miles from the location of a proposed exploratory well should be shown. An exploratory well is a well which is located two miles or more from the boundary of a known geologic structure or a producible well. For all other drillsites (development wells) existing roads within a one-mile radius of the location should be shown.

Any plans for the improvement and/or maintenance of existing roads should also be stated.

Information required by item Nos. 3 and 4 of this subsection may also be shown on this map if appropriately labeled.

2. *Planned access roads.* Information in this regard is to be submitted on a large scale map (not less than 4 inches = 1 mile) and shall appropriately identify all permanent and temporary access roads that are to be constructed, or reconstructed in connection with the drilling and production of the proposed well. Width, maximum grade, turnouts, drainage design, location and size of culverts, and surfacing material, if any, shall be stated. At the time of submission, the location of all proposed new or reconstructed roads shall be staked. However, modification of proposed road design may be required after the location is accepted.

Information should also be furnished to indicate where existing fences will be cut and whether gates or cattleguards will be used. Additionally, the discussion should make reference to any existing gates which are to be replaced by cattleguards.

3. *Location of existing wells.* This information should be submitted on a map of suitable scale and include all wells (producing, abandoned, temporary abandoned, shut-in, injection, disposal, and drilling) within a two-mile radius of the proposed location of an exploratory well or within a one-mile radius of the proposed location of a development well.

4. *Lateral roads to well locations.* The information submitted in this regard should be shown on a map of suitable scale and include all existing and proposed lateral roads to all well locations

wi [illegible] one-mile radius of the proposed lo[illegible]

5. *[illegible]ation of tank batteries, production facilities, and production, gathering, and service lines.* Existing tank batteries, production facilities and production, gathering, or service lines within a one-mile radius of the proposed location which are owned or controlled by the lessee or operator should be shown on a map or plat of suitable scale. The type of each present facility and the exact nature of each existing line (oil flowline, gas gathering line, injection line, or water disposal line) should be identified and it should be noted which, if any, of said lines are buried. If new facilities (tank battery, other production equipment, and lines) are contemplated in the event production is established and those facilities are to be located at other than on the well site itself, the map or plot furnished in this regard must also indicate the location all proposed new facilities. Future prospects for additional development of the leasehold should be considered in the siting of new facilities. However, final approval to construct such new facilities will not be granted until after detailed plans have been submitted and evaluated pursuant to Section V hereof.

6. *Location and type of water supply (rivers, creeks, lakes, ponds, and wells).* This information may be shown by quarter-quarter section on a plat or map [illegible] ble scale or may be a written [illegible] tion. The source of all water to be used in drilling the proposed well should be noted. The method of transporting the water shall be stated and any access roads neded to haul the water will be described in Items Nos. 1 or 2, as appropriate. However, the Survey's approval of the surface use and operations plan does not relieve the lessee or operator from obtaining any other authorization which may be required for the use of such water. Moreover, if a water supply well is to be drilled on the lease, it must be so stated under this item and the District Engineer or Area Oil and Gas Supervisor may require the filing of a separate application for permit to drill.

7. *Source of construction materials.* This information may be shown by quarter-quarter section on a plat or map of suitable scale or may be a written description. The proposed source, character, and use of all construction materials such as sand, gravel, stone, and soil material should be stated. Any access roads needed to haul such materials should be described in item No. 1 or 2, as appropriate.

8. *Methods for handling waste disposal.* A brief, written description should be given of the methods and location for safe containment and disposal of each type of waste material (cuttings, garbage, salts, chemicals, and sewage) which results from the drilling of the proposed [illegible]. Likewise, the narrative should in[illegible] plans for the eventual disposal of [illegible]ng fluids and any produced oil or water recovered during testing operations.

9. *Ancillary facilities.* The plan or subsequent amendments to such plans shall identify all ancillary facilities such as camps and airstrips as to their location, land area required, and the methods and standards to be employed in their construction. Such facilities shall be shown on a map of suitable scale and shall be staked on the ground.

10. *Well site layout.* A plat of suitable scale (not less than 1 inch=50 feet) including cross section diagrams of the drill pad and the relation to topography are required. The plat should also include the proposed location of the mud tanks, pits (reserve, burn, and trash), pipe racks, access road, turnaround areas, parking areas, living facilities, soil material stockpile, and the orientation of the rig with respect to the pad and other facilities. Plans to line the reserve pit should be indicated.

The exterior dimensions of the pad and reserve pit shall be specified and will be staked on the ground.

11. *Plans for restoration of the surface.* State the proposed program for surface restoration upon completion of the operation such as stockpiling topsoil, leveling, reseeding, and seed mixture. Such plans will be reviewed for adequacy by the appropriate Federal surface management agency. A proposed timetable for the commencement and completion of rehabilitation operations must be provided.

12. *Other information.* Include a general description of the topography, soil characteristics, formation lithologies, geologic features, flora, fauna, and other aspects of the area such as other surface use activities.

The surface ownership (Federal, Indian, State, or private) at the well location and for all lands which are to be crossed by newly constructed roads should be indicated.

Any available information which would be useful in evaluating the environmental impact of the proposed operation, including proximity to steep hillsides and gullies, water wells, ponds, lakes, or streams, occupied dwellings, or other facilities, and archeological, historical, or cultural sites should be included. Information concerning required cuts and fills during the construction of roads and the location should also be furnished.

All construction practices necessary to accommodate potential geologic hazards should be discussed under the appropriate items of the plan.

13. *Lessee's or operator's representative.* Include the name, address, and phone number of the lessee's or operator's field representative who is responsible for assuring compliance with the approved surface use and operations plan.

14. *Certification.* The following statement is to be incorporated in the plan and must be signed by the lessee's or operator's field representative who is identified in Item No. 13 of the plan:

> I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by ______________ and its contractors subcontractors in conformity with this plan and the terms and conditions under which it is approved.
>
> ______________
> Date
>
> ______________
> Name and Title

IV. ENVIRONMENTAL ANALYSIS REQUIREMENTS

When an application for permit to drill is received, an onsite inspection normally will be required. If made, it will include the District Engineer or Area Oil and Gas Supervisor, the lessee or operator, the Federal surface management agency, and others including the dirt contractor, as appropriate. The purpose of tihs inspection will be to select the most feasible and environmentally acceptable areas for well sites (considering geologic factors and Federal and State regulations), access roads and other proposed surface use areas. Accordingly, lessees and operators are encouraged to designate future development or drilling sites so that several locations may be inspected at one time.

When such an inspection is made, an environmental analysis will usually be prepared by the District Engineer or Area Oil and Gas Supervisor. Said analysis will identify methods for mitigating the potential adverse environmental effects associated with the proposed operation and will be the basis of the approving official's determination as to whether approval of the proposed activity would constitute a major Federal action significantly affecting the quality of the human environment as defined by Section 102(2)(C) of the National Environmental Policy Act of 1969. Any surface protection and rehabilitation requirements specified by the Federal surface management agency will normally be made a part of any subsequently approved permit or and/or the surface use and operations plan.

Due to the probability of a required onsite inspection, the required input from other Federal agencies, and the variations in the level of drilling activity, lessees and operators are encouraged to file applications well in advance of the time when it is desired to commence operations.

V. APPROVAL OF SUBSEQUENT OPERATIONS

Before repairing, deepening, or conditioning a well, a detailed written statement of the plan of work must be filed on Form 9-331 or 9-331C with the District Engineer or Area Oil and Gas Supervisor and approval obtained before the work is started. Any proposed change in any such plan of work must also receive the prior approval of the District Engineer or Area Oil and Gas Supervisor.

Lessees and operators are also required to submit for the approval of the District Engineer or Area Oil and Gas Supervisor

D-38

a s plan prior to undertaking any subse nt new construction, reconstruction, or alteration of existing facilities, including roads, dams, lines or other production facilities on any lease when additional surface disturbance will result. Sufficient information must be submitted to permit a proper evaluation of the proposed surface disturbing activities as well as any planned accommodations necessary to mitigate potential adverse environmental effects.

The environmental analysis procedures discussed in Section IV of this Notice will also apply to such subsequent operations which have the potential for significant surface disturbance although these requirements may be somewhat less in established producing areas.

VI. AGREEMENT FOR REHABILITATION OF PRIVATELY-OWNED SURFACE

Where the surface is privately owned or is owned by an Indian allottee, each application for permit to drill or to conduct other surface disturbance activities, shall contain information concerning the surface owner's rehabilitation requirements. A written agreement between the lessee or operator and the surface owner is not necessary if a letter from the lessee or the operator setting forth the surface owner's rehabilitation requirements is furnished. P ment of damages in lieu of restor tion will not be an accept a stitute for a normal cleanup and r tation program.

If no arrangements have been made, or if information concerning such arrangements is not furnished, the District Engineer or Area Oil and Gas Supervisor will request the Federal surface management agency to recommend the necessary surface restoration requirements. In such cases, the lessee or operator will be expected to comply with these rehabilitation requirements, if any, regardless of the arrangement made with the surface owner. Provided, however, that subsequent reasonable requests by the surface owner that pits, roads, and other facilities be left intact may be honored. If written proof of prior arrangements has been provided, the Federal surface management agency will be asked to recommend surface rehabilitation requirements to the District Engineer or Area Oil and Gas Supervisor giving full consideration to the preferences of the landowner.

VI. WELL ABANDONMENT

No well abandonment operations may be commenced in the absence of the prior approval of the District Engineer or Area Oil and Gas Supervisor. However, the Federal surface management agency may request additional surface rehabilitation measures at abandonment and these requirements are normally made a part of the Geological Survey's approval of onment. Upon completion of the onment and rehabilitation oper s, the lessee or operator should notify the District Engineer or Area Oil and Gas Supervisor that the location is ready for inspection. However, final abandonment will not be approved until the surface rehabilitation work required by the drilling permit or abandonment notice has been completed and the required vegetation is established to the satisfaction of the appropriate Federal surface management agency.

VII. WATER WELL CONVERSION

The complete abandonment of a well which has encountered usable fresh water will not be approved if the Federal surface management agency determines it wants to acquire the well. If, at abandonment, the Federal surface management agency elects to assume further responsibility for the well, it will reimburse the lessee or operator for the cost of any recoverable casing left in the hole solely because it is to be completed as a water well. The lessee or operator will abandon the well to the base of the deepest fresh water zone of interest as required by the District Engineer or Area Oil and Gas Supervisor and will complete the surface cleanup and rehabilitation as required by the drilling permit or abandonment notice immediately upon completion of the conversion operations.

[FR Doc.75-29641 Filed 11-10-75;8:45 am]

National Park Service

BOSTON NATIONAL HISTORICAL PARK ADVISORY COMMISSION

Notice of Meeting

Notice is hereby given in accordance with the Federal Advisory Committee Act, Public Law 92-463, that a meeting of the Boston National Historical Park Advisory Commission will be held at 10:00 a.m. on December 8, 1975, at the North Atlantic Regional Office, Room 715, 150 Causeway Street, Boston, Massachusetts.

The Commission was established by Public Law 93-431 to advise the Secretary of the Interior on matters relating to the development of the Boston National Historical Park.

The members of the Advisory Commission are as follows:

Mr. Richard A. Berenson, Chairman, Brookline, Massachusetts.

Dr. Evelyn Murphy, Lexington, Massahcusetts.

Mr. Byron D. Rushing, Boston, Massachusetts.

Mrs. Katherine D. Kane, Boston, Massachusetts.

Mr. Maurice F. O'Shea, Charlestown, Massachusetts.

Mr. Guy A. Benloati, Boston, Massachusetts.

The matters to be discussed at this meeting include:

1. The role of National Parke Service advisory commissions.
2. The organization of the Commission.
3. Status of funding.
4. Status of park administration and operations.
5. Status of cooperative agreement.
6. A review of alternative plans for the management, development and use of the resources included within the Boston National Historical Park.

The meeting will be open to the public. However, facilities and space are limited, and it is expected that not more than 25 persons will be able to attend the sessions. Any member of the public may file with the committee a written statement concerning the matters to be discussed.

Persons wishing further information concerning this meeting, or who wish to submit written statements, may contact Hugh D. Gurney, Project Manager, Boston National Historical Park at 617-223-3777. Minutes of the meeting will be available for public inspection four weeks after the meeting at the office of the North Atlantic Region, 150 Causeway Street, Boston, Massachusetts.

Dated: October 23, 1975.

JERRY D. WAGERS,
Regional Director.

[FR Doc. 75-30370 Filed 11-10-75; 8:45 am]

NORTH ATLANTIC REGION ADVISORY COMMISSION

Notice of Meeting

Notice is hereby given in accordance with the Federal Advisory Committee Act, that a meeting of the North Atlantic Region Advisory Commission will be held at 9 a.m., e.d.t. on December 4, 1975 through 4:30 p.m. on December 5, 1975, at Minute Man National Historical Park, Lexington, Massachusetts.

The purpose of the Commission is to provide for the free exchange of ideas between the National Park Service and the public, and to facilitate the solicitation of advice or other council from members of the public on problems and programs pertinent to the North Atlantic Region.

The members of the Commission are as follows:

Mr. John N. Cole,
Brunswick, Maine.
Ms. Antoinette F. Downing,
Providence, Rhode Island.
Mrs. Arthur Fenske,
Green Village, New Jersey.
Mr. Charles H. W. Foster,
Needham, Massachusetts.
Mr. George T. Hamilton, Dover, New Hampshire.
M. John P. Keith, Hartsdale, New York.
Mr. Frederick R. Micha, Ontario, New York.
Mr. William A. Niering, Gales Ferry, Connecticut.
Mr. William B. Pinney, Charlotte, Vermont.

The purpose of this meeting is as follows:

1. Briefing by the North Atlantic Regional Director on current events in the Region.
2. Discuss and prepare final report of Springfield Armory visit.
3. Receive and discuss report of Acadia National Park visit.
4. The final discussion of Urban Park and Recreation
5. Discussion of National Park Service Planning Procedure.

The meeting will be open to the public. However, facilities and space for accommodating members of the public are limited, and persons will be accommodated on a first come, first served basis. There will be a tour of Minute Man National Historical Park beginning at the Sheraton Lexington, Concord at 9 AM, December 4, 1975 and ending at 12 noon at the

United States Department of the Interior

GEOLOGICAL SURVEY

CONSERVATION DIVISION

NOTICE

To: All Federal Lessees/Operators

As you know, each application for permit to drill under a Federal oil and gas lease must be accompanied by a 12-point development plan for surface use. The following is furnished for your information and guidance in preparing the required plan. A copy of the plan should also be furnished the appropriate Federal surface management agency at the time it is filed with the Geological Survey.

1. Existing roads including location of the exit from the main highway.

   This information should be submitted on a map (USGS topographic or county road map with a scale no less than 1 inch = 4 miles) and include at least one locatable reference point and the main access road in the vicinity of the proposed location along with all existing roads within a minimum 3-mile radius of the proposed location. Trails and shortcuts need be shown only if they will be used for access. Additional required information under Nos. 2, 3, and 4 below may be placed on this map if appropriately labeled.

2. Planned access roads.

   This information should be submitted on a map and include all access roads that are to be constructed or improved upon in connection with the drilling and producing of the proposed well. Road construction should be kept to a minimum.

3. Location of existing wells.

   This information should be submitted on a map and include all wells (producing, abandoned, temporary abandoned, shut-in, injection, drilling, etc.) within a 2-mile radius of the proposed location for an exploratory well. An exploratory well is a well 2 miles or more distant from a KGS or a producing well. For all other drill sites (development wells) such information should be shown within a half-mile radius of the proposed location.

4. Lateral roads to well locations.

This information should be submitted on a map and include all lateral roads to all well locations within a half-mile radius of the proposed location. This information may be previously covered by the data given for Nos. 1 and 2.

5. Location of tank batteries and flow lines.

This information should be submitted on a plat or map showing the proposed location of the tank battery and flow lines associated with the proposed well in the event production is established. Future development of the lease should be considered in the location of the tank battery. Existing tank batteries and flow lines within a half-mile radius of the proposed location should be shown.

6. Location and type of water supply (rivers, creeks, lakes, ponds, wells, etc.).

This information may be shown on a plat or map or may be a written description. Source of all water to be used in the drilling operations of the proposed well should be noted.

7. Methods for handling waste disposal.

A brief written description should be given of the methods for disposing of each type of waste material (cuttings, garbage, trash, etc.) from the drilling of the proposed well.

8. Location of camps.

Where applicable, this information may be shown on a map or plat, or be a written description of the location of the drill camp site. Any proposed permanent-type structures should be noted.

9. Location of airstrips.

Where applicable, any airstrip that is to be constructed or maintained for use during the drilling operations should be shown on a map.

10. Location of layout to include position of the rig; mud tanks, reserve pits, burn pits, pipe racks, etc.

This information should be shown on a plat with the approximate scale used and the compass direction shown. The general topography in the immediate area should be shown or described on the plat so the location of rig and associated facilities in relation to the surface features is apparent.

11. Plans for restoration of the surface.

State the proposed program for surface restoration upon completion of operation (stockpiling topsoil, leveling, reseeding, seed mixture, etc.). Such plans will be reviewed by the surface agency for adequacy.

12. Any other information that may be used in evaluating the impact on environment. Include general description of the topography, vegetation, and other aspects of the area.

Any available information that would be useful in evaluating the environmental aspects of the operation, including proximity to steep hillsides and gullies, cut and fill needed, etc., should be included.

The filing of the application for permit to drill and the 12-point development plan should allow adequate time for contact with any appropriate surface agency and joint inspection of the location where necessary.

APPENDIX E

ENVIRONMENTAL PROTECTION AGENCY
RULES AND REGULATIONS PERTAINING
TO AN OIL AND GAS OPERATION

E

vironmental Protection Agency may permit the discharge of oil into or upon the navigable waters of the United States, adjoining shorelines, or into or upon the waters of the contiguous zone, in connection with research, demonstration projects, or studies relating to the prevention, control, or abatement of oil pollution.

§ 110.9 Notice.

Any person in charge of any vessel or onshore or offshore facility shall, as soon as he has knowledge of any discharge of oil from such vessel or facility in violation of § 110.5 of this part, immediately notify the U.S. Coast Guard of such discharge in accordance with such procedures as the Secretary of Transportation may prescribe.

E-1

PART 112—OIL POLLUTION PREVENTION

Sec.
112.1 General applicability.
112.2 Definitions.
112.3 Requirements for preparation and implementation of Spill Prevention Control and Countermeasure plans.
112.4 Amendment of SPCC Plans by Regional Administrator.
112.5 Amendment of Spill Prevention Control and Countermeasure Plans by owners or operators.
112.6 Civil penalties for violation of Oil Pollution Prevention Regulations.
112.7 Guidelines for the preparation and implementation of a Spill Prevention Control and Countermeasure Plan.
Appendix Memorandum of Understanding Between the Secretary of the Department of Transportation and the Administrator of the Environmental Protection Agency. Section II—Definitions.

AUTHORITY: Secs. 311(j)(1)(C), 311(j)(2); 501(a), Federal Water Pollution Control Act (Sec. 2, Pub. L. 92-500, 86 Stat. 816 et seq. (33 U.S.C. 1251 et seq.)); Sec. 4(b), Pub. L. 92-500, 86 Stat. 897; 5 U.S.C. Reorg. Plan of 1970 No. 3 (1970), 35 FR 15623, 3 CFR 1966-1970 Comp.; E.O. 11735, 38 FR 21243, 3 CFR, unless otherwise noted.

SOURCE: 38 FR 34165, Dec. 11, 1973, unless otherwise noted.

§ 112.1 General applicability.

(a) This part establishes procedures, methods and equipment and other requirements for equipment to prevent the discharge of oil from non-transportation-related onshore and offshore facilities into or upon the navigable waters of the United States or adjoining shorelines.

(b) Except as provided in paragraph (d) of this section, this part applies to owners or operators of non-transportation-related onshore and offshore facilities engaged in drilling, producing, gathering, storing, processing, refining, transferring, distributing or consuming oil and oil products, and which, due to their location, could reasonably be expected to discharge oil in harmful quantities, as defined in Part 110 of this chapter, into or upon the navigable waters of the United States or adjoining shorelines.

(c) As provided in sec. 313 (86 Stat. 875) departments, agencies, and instrumentalities of the Federal government are subject to these regulations to the same extent as any person, except for the provisions of § 112.6.

(d) This part does not apply to:

(1) Equipment or operations of vessels or transportation-related onshore and offshore facilities which are subject to authority and control of the Department of Transportation, as defined in the Memorandum of Understanding between the Secretary of Transportation and the Administrator of the Environmental Protection Agency, dated November 24, 1971, 36 FR 24000.

(2) Facilities which have an aggregate storage of 1320 gallons or less of oil, provided no single container has a capacity in excess of 660 gallons.

(3) Facilities which have a total storage capacity of 42000 gallons or less of oil and such total storage capacity is buried underground.

(4) Non-transportation-related onshore and offshore facilities, which, due to their location, could not reasonably be expected to discharge oil into or upon the navigable waters of the United States or adjoining shorelines.

(e) This part provides for the preparation and implementation of Spill Prevention Control and Countermeasure Plans prepared in accordance with § 112.7, designed to complement existing laws, regulations, rules, standards, policies and procedures pertaining to safety standards, fire prevention and pollution prevention rules, so as to form a comprehensive balanced Federal/State spill prevention program to minimize the potential for oil discharges. Compliance with this part does not in any way relieve the owner or operator of an onshore or an offshore facility from compliance with other Federal, State or local laws.

§ 112.2 Definitions.

For the purposes of this part:

(a) "Oil" means oil of any kind or in any form, including, but not limited to petroleum, fuel oil, sludge, oil refuse and oil mixed with wastes other than dredged spoil.

(b) "Discharge" includes but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying or dumping. For purposes of this part, the term "discharge" shall not include any discharge of oil which is authorized by a permit issued pursuant to Section 13 of the River and Harbor Act of 1899 (30 Stat. 1121, 33 U.S.C. 407), or Sections 402 or 405 of the FWPCA Amendments of 1972 (86 Stat. 816 et seq., 33 U.S.C. 1251 et seq.).

(c) "Onshore facility" means any facility of any kind located in, on, or under any land within the United States, other than submerged lands, which is not a transportation-related facility.

(d) "Offshore facility" means any facility of any kind located in, on, or under any of the navigable waters of the United States, which is not a transportation-related facility.

(e) "Owner or operator" means any person owning or operating an onshore facility or an offshore facility, and in the case of any abandoned offshore facility, the person who owned or operated such facility immediately prior to such abandonment.

(f) "Person" includes an individual, firm, corporation, association, and a partnership.

(g) "Regional Administrator", means the Regional Administrator of the Environmental Protection Agency, or his designee, in and for the Region in which the facility is located.

(h) "Transportation-related" and "non-transportation-related" as applied to an onshore or offshore facility, are defined in the Memorandum of Understanding between the Secretary of Transportation and the Administrator of the Environmental Protection Agency, dated November 24, 1971, 36 FR 24080.

(i) "Spill event" means a discharge of oil into or upon the navigable waters of the United States or adjoining shorelines in harmful quantities, as defined at 40 CFR Part 110.

(j) "United States" means the States, the District of Columbia, the Commonwealth of Puerto Rico, the Canal Zone, Guam, American Samoa, the Virgin Islands, and the Trust Territory of the Pacific Islands.

(k) The term "navigable waters" of the United States means "navigable waters" as defined in section 502(7) of the FWPCA, and includes:

(1) All navigable waters of the United States, as defined in judicial decisions prior to passage of the 1972 Amendments to the FWPCA (Pub. L. 92-500), and tributaries of such waters;

(2) Interstate waters;

(3) Intrastate lakes, rivers, and streams which are utilized by interstate travelers for recreational or other purposes; and

(4) Intrastate lakes, rivers, and streams from which fish or shellfish are taken and sold in interstate commerce.

(l) "Vessel" means every description of watercraft or other artificial contrivance used, or capable of being used as a means of transportation on water, other than a public vessel.

§ 112.3 Requirements for preparation and implementation of Spill Prevention Control and Countermeasure Plans.

(a) Owners or operators of onshore and offshore facilities in operation on or before the effective date of this part that have discharged or could reasonably be expected to discharge oil in harmful quantities, as defined in 40 CFR Part 110, into or upon the navigable waters of the United States or adjoining shorelines, shall prepare a Spill Prevention Control and Countermeasure Plan (hereinafter "SPCC Plan"), in accordance with § 112.7. Except as provided for in paragraph (f) of this section, such SPCC Plan shall be prepared within six months after the effective date of this part and shall be fully implemented as soon as possible, but not later than one year after the effective date of this part.

(b) Owners or operators of onshore and offshore facilities that become operational after the effective date of this part, and that have discharged or could reasonably be expected to discharge oil in harmful quantities, as defined in 40 CFR Part 110, into or upon the navigable waters of the United States or adjoining shorelines, shall prepare an SPCC Plan in accordance with § 112.7. Except as provided for in paragraph (f) of this section, such SPCC Plan shall be prepared within six months after the date such facility begins operations and shall be fully implemented as soon as possible, but not later than one year after such facility begins operations.

(c) Onshore and offshore mobile or portable facilities such as onshore drilling or workover rigs, barge mounted offshore drilling or workover rigs, and portable fueling facilities shall prepare and implement an SPCC Plan as required by paragraphs (a), (b) and (d) of this section. The owner or operator of such facility need not prepare and implement a new SPCC Plan each time the facility is moved to a new site. The SPCC Plan for mobile facilities should be prepared in accordance with § 112.7, using good engineering practice, and when the mobile facility is moved it should be located and installed using spill prevention practices outlined in the SPCC Plan for the facility. The SPCC Plan shall only apply while the facility is in a fixed (non transportation) operating mode.

(d) No SPCC Plan shall be effective to satisfy the requirements of this part unless it has been reviewed by a Registered Professional Engineer and certified to by such Professional Engineer. By means of this certification the engineer, having examined the facility and being familiar with the provisions of this part, shall attest that the SPCC Plan has been prepared in accordance with good engineering practices. Such certification shall in no way relieve the owner or operator of an onshore or offshore facility of his duty to prepare and fully implement such Plan in accordance with § 112.7, as required by paragraphs (a), (b) and (c) of this section.

(e) Owners or operators of a facility for which an SPCC Plan is required pursuant to paragraphs (a), (b) or (c) of this section shall maintain a complete copy of the Plan at such facility if the facility is normally attended at least 8 hours per day, or at the nearest field office if the facility is not so attended, and shall make such Plan available to the Regional Administrator for on-site review during normal working hours.

(f) Extensions of time.

(1) The Regional Administrator may authorize an extension of time for the preparation and full implementation of an SPCC Plan beyond the time permitted for the preparation and implementation of an SPCC Plan pursuant to paragraphs (a), (b) or (c) of this section where he finds that the owner or operator of a facility subject to paragraphs (a), (b) or (c) of this section cannot fully comply with the requirements of this part as a result of either nonavailability of qualified personnel, or delays in construction or equipment delivery beyond the control and without the fault of such owner or operator or their respective agents or employees.

(2) Any owner or operator seeking an extension of time pursuant to paragraph (f)(1) of this section may submit a letter of request to the Regional Administrator. Such letter shall include:

(i) A complete copy of the SPCC Plan, if completed;

(ii) A full explanation of the cause for any such delay and the specific aspects of the SPCC Plan affected by the delay;

(iii) A full discussion of actions being taken or contemplated to minimize or mitigate such delay;

(iv) A proposed time schedule for the implementation of any corrective actions being taken or contemplated, including interim dates for completion of tests or studies, installation and operation of any necessary equipment or other preventive measures.

In addition, such owner or operator may present additional oral or written statements in support of his letter of request.

(3) The submission of a letter of request for extension of time pursuant to paragraph (f)(2) of this section shall in no way relieve the owner or operator from his obligation to comply with the requirements of § 112.3 (a), (b) or (c). Where an extension of time is authorized by the Regional Administrator for particular equipment or other specific aspects of the SPCC Plan, such extension shall in no way affect the owner's or operator's obligation to comply with the requirements of § 112.3 (a), (b) or (c) with respect to other equipment or other specific aspects of the SPCC Plan for which an extension of time has not been expressly authorized.

§ 112.4 Amendment of SPCC Plans by Regional Administrator.

(a) Notwithstanding compliance with § 112.3, whenever a facility subject to § 112.3 (a), (b) or (c) has: Discharged more than 1,000 U.S. gallons of oil into or upon the navigable waters of the United States or adjoining shorelines in a single spill event, or discharged oil in harmful quantities, as defined in 40 CFR Part 110, into or upon the navigable waters of the United States or adjoining shorelines in two spill events, reportable under section 311(b)(5) of the FWPCA, occurring within any twelve month period, the owner or operator of such facility shall submit to the Regional Administrator, within 60 days from the time such facility becomes subject to this section, the following:

(1) Name of the facility;

(2) Name(s) of the owner or operator of the facility;

(3) Location of the facility;

(4) Date and year of initial facility operation;

(5) Maximum storage or handling capacity of the facility and normal daily throughput;

(6) Description of the facility, including maps, flow diagrams, and topographical maps;

(7) A complete copy of the SPCC Plan with any amendments;

(8) The cause(s) of such spill, including a failure analysis of system or subsystem in which the failure occurred;

(9) The corrective actions and/or countermeasures taken, including an adequate description of equipment repairs and/or replacements;

(10) Additional preventive measures taken or contemplated to minimize the possibility of recurrence;

(11) Such other information as the Regional Administrator may reasonably require pertinent to the Plan or spill event.

(b) Section 112.4 shall not apply until the expiration of the time permitted for the preparation and implementation of an SPCC Plan pursuant to § 112.3 (a), (b), (c) and (f).

(c) A complete copy of all information provided to the Regional Administrator pursuant to paragraph (a) of this section shall be sent at the same time to the State agency in charge of water pollution control activities in and for the State in which the facility is located. Upon receipt of such information such State agency may conduct a review and make recommendations to the Regional Administrator as to further procedures, methods, equipment and other requirements for equipment necessary to prevent and to contain discharges of oil from such facility.

(d) After review of the SPCC Plan for a facility subject to paragraph (a) of this section, together with all other information submitted by the owner or operator of such facility, and by the State agency under paragraph (c) of this section, the Regional Administrator may require the owner or operator of such facility to amend the SPCC Plan if he finds that the Plan does not meet the requirements of this part or that the amendment of the Plan is necessary to prevent and to contain discharges of oil from such facility.

(e) When the Regional Administrator proposes to require an amendment to the SPCC Plan, he shall notify the facility operator by certified mail addressed to, or by personal delivery to, the facility owner or operator, that he proposes to require an amendment to the Plan, and shall specify the terms of such amendment. If the facility owner or operator is a corporation, a copy of such notice shall also be mailed to the registered agent, if any, of such corporation in the State where such facility is located. Within 30 days from receipt of such notice, the facility owner or operator may submit written information, views, and arguments on the amendment. After considering all relevant material presented, the Regional Administrator shall notify the facility owner or operator of any amendment required or shall rescind the notice. The amendment required by the Regional Administrator shall become part of the Plan 30 days after such notice, unless the Regional Administrator, for good cause, shall specify another effective date. The owner or operator of the facility shall implement the amendment of the Plan as soon as possible, but not later than six months after the amendment becomes part of the Plan, unless the Regional Administrator specifies another date.

(f) An owner or operator may appeal a decision made by the Regional Administrator requiring an amendment to an SPCC Plan. The appeal shall be made to the Administrator of the United States Environmental Protection Agency and must be made in writing within 30 days of receipt of the notice from the Regional Administrator requiring the amendment. A complete copy of the appeal must be sent to the Regional Administrator at the time the appeal is made. The appeal shall contain a clear and concise statement of the issues and points of fact in the case. It may also contain additional information which the owner or operator wishes to present in support of his argument. The Administrator or his designee may request additional information from the owner or operator, or from any other person. The Administrator or his designee may request additional information from the owner or operator, or from any other person. The Administrator or his designee shall render a decision within 60 days of receiving the appeal and shall notify the owner or operator of his decision.

§ 112.5 Amendment of Spill Prevention Control and Countermeasure Plans by owners or operators.

(a) Owners or operators of facilities subject to § 112.3 (a), (b) or (c) shall amend the SPCC Plan for such facility in accordance with § 112.7 whenever there is a change in facility design, construction, operation or maintenance which materially affects the facility's potential for the discharge of oil into or upon the navigable waters of the United States or adjoining shorelines. Such amendments shall be fully implemented as soon as possible, but not later than six months after such change occurs.

(b) Notwithstanding compliance with paragraph (a) of this section, owners and operators of facilities subject to § 112.3 (a), (b) or (c) shall complete a review and evaluation of the SPCC Plan at least once every three years from the date such facility becomes subject to this part. As a result of this review and evaluation, the owner or operator shall amend the SPCC Plan within six months of the review to include more effective prevention and control technology if: (1) Such technology will significantly reduce the likelihood of a spill event from the facility, and (2) if such technology has been field-proven at the time of the review.

(c) No amendment to an SPCC Plan shall be effective to satisfy the requirements of this section unless it has been certified by a Professional Engineer in accordance with § 112.3(d).

§ 112.6 Civil penalties for violation of Oil Pollution Prevention Regulations.

Owners or operators of facilities subject to § 112.3(a), (b) or (c) who violate the requirements of this Part 112 by failing or refusing to comply with any of the provisions of § 112.3, § 112.4 or § 112.5 shall be liable for a civil penalty of not more than $5,000 for each day such violation continues. Civil penalties shall be imposed in accordance with procedures set out in Part 114 of this subchapter D.

(Secs. 311(j), 501(a), Pub. Law 92-500, 86 Stat. 868, 885 (33 U.S.C. 1321(j), 1361(a)))
[39 FR 31602, Aug. 29, 1974]

§ 112.7 Guidelines for the preparation and implementation of a Spill Prevention Control and Countermeasure Plan.

The SPCC Plan shall be a carefully thought-out plan, prepared in accordance with good engineering practices, and which has the full approval of management at a level with authority to commit the necessary resources. If the plan calls for additional facilities or procedures, methods, or equipment not yet fully operational, these items should be discussed in separate paragraphs, and the details of installation and operational start-up should be explained separately. The complete SPCC Plan shall follow the sequence outlined below, and include a discussion of the facility's conformance with the appropriate guidelines listed:

(a) A facility which has experienced one or more spill events within twelve months prior to the effective date of this part should include a written description of each such spill, corrective action taken and plans for preventing recurrence.

(b) Where experience indicates a reasonable potential for equipment failure (such as tank overflow, rupture, or leakage), the plan should include a prediction of the direction, rate of flow, and total quantity of oil which could be discharged from the facility as a result of each major type of failure.

(c) Appropriate containment and/or diversionary structures or equipment to prevent discharged oil from reaching a navigable water course should be provided. One of the following preventive systems or its equivalent should be used as a minimum:

(1) Onshore facilities.

(i) Dikes, berms or retaining walls sufficiently impervious to contain spilled oil

(ii) Curbing

(iii) Culverting, gutters or other drainage systems

(iv) Weirs, booms or other barriers

(v) Spill diversion ponds

(vi) Retention ponds

(vii) Sorbent materials

(2) Offshore facilities.

(i) Curbing, drip pans

(ii) Sumps and collection systems

(d) When it is determined that the installation of structures or equipment listed in § 112.7(c) to prevent discharged oil from reaching the navigable waters is not practicable from any onshore or offshore facility, the owner or operator should clearly demonstrate such impracticability and provide the following:

(1) A strong oil spill contingency plan following the provision of 40 CFR Part 109.

(2) A written commitment of manpower, equipment and materials required to expeditiously control and remove any harmful quantity of oil discharged.

(e) In addition to the minimal prevention standards listed under § 112.7 (c), sections of the Plan should include a complete discussion of conformance with the following applicable guidelines, other effective spill prevention and containment procedures (or, if more stringent, with State rules, regulations and guidelines):

(1) *Facility drainage (onshore); (excluding production facilities).* (i) Drainage from diked storage areas should be restrained by valves or other positive means to prevent a spill or other excessive leakage of oil into the drainage system or inplant effluent treatment system, except where plan systems are designed to handle such leakage. Diked areas may be emptied by pumps or ejectors; however, these should be manually activated and the condition of the accumulation should be examined before starting to be sure no oil will be discharged into the water.

(ii) Flapper-type drain valves should not be used to drain diked areas. Valves used for the drainage of diked areas should, as far as practical, be of manual, open-and-closed design. When plant drainage drains directly into water courses and not into wastewater treatment plants, retained storm water should be inspected as provided in paragraph (e) (2) (iii) (B, C and D) before drainage.

(iii) Plant drainage systems from undiked areas should, if possible, flow into ponds, lagoons or catchment basins, designed to retain oil or return it to the facility. Catchment basins should not be located in areas subject to periodic flooding.

(iv) If plant drainage is not engineered as above, the final discharge of all in-plant ditches should be equipped with a diversion system that could, in the event of an uncontrolled spill, return the oil to the plant.

(v) Where drainage waters are treated in more than one treatment unit, natural hydraulic flow should be used. If pump transfer is needed, two "lift" pumps should be provided, and at least one of the pumps should be permanently installed when such treatment is continuous. In any event, whatever techniques are used facility drainage systems should be adequately engineered to prevent oil from reaching navigable waters in the event of equipment failure or human error at the facility.

(2) *Bulk storage tanks (onshore); (excluding production facilities).* (i) No tank should be used for the storage of oil unless its material and construction are compatible with the material stored and conditions of storage such as pressure and temperature, etc.

(ii) All bulk storage tank installations should be constructed so that a secondary means of containment is provided for the entire contents of the largest single tank plus sufficient freeboard to allow for precipitation. Diked areas should be sufficiently impervious to contain spilled oil. Dikes, containment curbs, and pits are commonly employed for this purpose, but they may not always be appropriate. An alternative system could consist of a complete drainage trench enclosure arranged so that a spill could terminate and be safely confined in an in-plant catchment basin or holding pond.

(iii) Drainage of rainwater from the diked area into a storm drain or an effluent discharge that empties into an open water course, lake, or pond, and bypassing the in-plant treatment system may be acceptable if:

(A) The bypass valve is normally sealed closed.

(B) Inspection of the run-off rain water ensures compliance with applicable water quality standards and will not cause a harmful discharge as defined in 40 CFR 110.

(C) The bypass valve is opened, and resealed following drainage under responsible supervision.

(D) Adequate records are kept of such events.

(iv) Buried metallic storage tanks represent a potential for undetected spills. A new buried installation should be protected from corrosion by coatings, cathodic protection or other effective methods compatible with local soil conditions. Such buried tanks should at least be subjected to regular pressure testing.

(v) Partially buried metallic tanks for the storage of oil should be avoided, unless the buried section of the shell is adequately coated, since partial burial in damp earth can cause rapid corrosion of metallic surfaces, especially at the earth/air interface.

(vi) Aboveground tanks should be subject to periodic integrity testing, taking into account tank design (floating roof, etc.) and using such techniques as hydrostatic testing, visual inspection or a system of non-destructive shell thickness testing. Comparison records should be kept where appropriate, and tank supports and foundations should be included in these inspections. In addition, the outside of the tank should frequently be observed by operating personnel for signs of deterioration, leaks which might cause a spill, or accumulation of oil inside diked areas.

E-4

(vii) To control leakage through defective internal heating coils, the following factors should be considered and applied, as appropriate.

(A) The steam return or exhaust lines from internal heating coils which discharge into an open water course should be monitored for contamination, or passed through a settling tank, skimmer, or other separation or retention system.

(B) The feasibility of installing an external heating system should also be considered.

(viii) New and old tank installations should, as far as practical, be fail-safe engineered or updated into a fail-safe engineered installation to avoid spills. Consideration should be given to providing one or more of the following devices:

(A) High liquid level alarms with an audible or visual signal at a constantly manned operation or surveillance station; in smaller plants an audible air vent may suffice.

(B) Considering size and complexity of the facility, high liquid level pump cutoff devices set to stop flow at a predetermined tank content level.

(C) Direct audible or code signal communication between the tank gauger and the pumping station.

(D) A fast response system for determining the liquid level of each bulk storage tank such as digital computers, telepulse, or direct vision gauges or their equivalent.

(E) Liquid level sensing devices should be regularly tested to insure proper operation.

(ix) Plant effluents which are discharged into navigable waters should have disposal facilities observed frequently enough to detect possible system upsets that could cause an oil spill event.

(x) Visible oil leaks which result in a loss of oil from tank seams, gaskets, rivets and bolts sufficiently large to cause the accumulation of oil in diked areas should be promptly corrected.

(xi) Mobile or portable oil storage tanks (onshore) should be positioned or located so as to prevent spilled oil from reaching navigable waters. A secondary means of containment, such as dikes or catchment basins, should be furnished for the largest single compartment or tank. These facilities should be located where they will not be subject to periodic flooding or washout.

(3) *Facility transfer operations, pumping, and in-plant process (onshore); (excluding production facilities).* (i) Buried piping installations should have a protective wrapping and coating and should be cathodically protected if soil conditions warrant. If a section of buried line is exposed for any reason, it should be carefully examined for deterioration. If corrosion damage is found, additional examination and corrective action should be taken as indicated by the magnitude of the damage. An alternative would be the more frequent use of exposed pipe corridors or galleries.

(ii) When a pipeline is not in service, or in standby service for an extended time the terminal connection at the transfer point should be capped or blank-flanged, and marked as to origin.

(iii) Pipe supports should be properly designed to minimize abrasion and corrosion and allow for expansion and contraction.

(iv) All aboveground valves and pipelines should be subjected to regular examinations by operating personnel at which time the general condition of

items, such as flange joints, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces should be assessed. In addition, periodic pressure testing may be warranted for piping in areas where facility drainage is such that a failure might lead to a spill event.

(v) Vehicular traffic granted entry into the facility should be warned verbally or by appropriate signs to be sure that the vehicle, because of its size, will not endanger above ground piping.

(4) *Facility tank car and tank truck loading/unloading rack (onshore).* (i) Tank car and tank truck loading/unloading procedures should meet the minimum requirements and regulation established by the Department of Transportation.

(ii) Where rack area drainage does not flow into a catchment basin or treatment facility designed to handle spills, a quick drainage system should be used for tank truck loading and unloading areas. The containment system should be designed to hold at least maximum capacity of any single compartment of a tank car or tank truck loaded or unloaded in the plant.

(iii) An interlocked warning light or physical barrier system, or warning signs, should be provided in loading/unloading areas to prevent vehicular departure before complete disconnect of flexible or fixed transfer lines.

(iv) Prior to filling and departure of any tank car or tank truck, the lowermost drain and all outlets of such vehicles should be closely examined for leakage, and if necessary, tightened, adjusted, or replaced to prevent liquid leakage while in transit.

(5) *Oil production facilities (onshore).* (i) *Definition.* An onshore production facility may include all wells, flowlines, separation equipment, storage facilities, gathering lines, and auxiliary non-transportation-related equipment and facilities in a single geographical oil or gas field operated by a single operator.

(ii) *Oil production facility (onshore) drainage.* (A) At tank batteries and central treating stations where an accidental discharge of oil would have a reasonable possibility of reaching navigable waters, the dikes or equivalent required under § 112.7(c)(1) should have drains closed and sealed at all times except when rainwater is being drained. Prior to drainage, the diked area should be inspected as provided in paragraph (e)(2)(iii)(B), (C), and (D). Accumulated oil on the rainwater should be picked up and returned to storage or disposed of in accordance with approved methods.

(B) Field drainage ditches, road ditches, and oil traps, sumps or skimmers, if such exist, should be inspected at regularly scheduled intervals for accumulation of oil that may have escaped from small leaks. Any such accumulations should be removed.

(iii) *Oil production facility (onshore) bulk storage tanks.* (A) No tank should be used for the storage of oil unless its material and construction are compatible with the material stored and the conditions of storage.

(B) All tank battery and central treating plant installations should be provided with a secondary means of containment for the entire contents of the largest single tank if feasible, or alternate systems such as those outlined in § 112.7(c)(1). Drainage from undiked areas should be safely confined in a catchment basin or holding pond.

(C) All tanks containing oil should be visually examined by a competent person for condition and need for maintenance on a scheduled periodic basis. Such examination should include the foundation and supports of tanks that are above the surface of the ground.

(D) New and old tank battery installations should, as far as practical, be fail-safe engineered or updated into a fail-safe engineered installation to prevent spills. Consideration should be given to one or more of the following:

(*1*) Adequate tank capacity to assure that a tank will not overfill should a pumper/gauger be delayed in making his regular rounds.

(*2*) Overflow equalizing lines between tanks so that a full tank can overflow to an adjacent tank.

(*3*) Adequate vacuum protection to prevent tank collapse during a pipeline run.

(*4*) High level sensors to generate and transmit an alarm signal to the computer where facilities are a part of a computer production control system.

(iv) *Facility transfer operations, oil production facility (onshore).* (A) All above ground valves and pipelines should be examined periodically on a scheduled basis for general condition of items such as flange joints, valve glands and bodies, drip pans, pipeline supports, pumping well polish rod stuffing boxes, bleeder and gauge valves.

(ii) Salt water (oil field brine) disposal facilities should be examined often, particularly following a sudden change in atmospheric temperature to detect possible system upsets that could cause an oil discharge.

(C) Production facilities should have a program of flowline maintenance to prevent spills from this source. The program should include periodic examinations, corrosion protection, flowline replacement, and adequate records, as appropriate, for the individual facility.

(6) *Oil drilling and workover facilities (onshore)* (i) Mobile drilling or workover equipment should be positioned or located so as to prevent spilled oil from reaching navigable waters.

(ii) Depending on the location, catchment basins or diversion structures may be necessary to intercept and contain spills of fuel, crude oil, or oily drilling fluids.

(iii) Before drilling below any casing string or during workover operations, a blowout prevention (BOP) assembly and well control system should be installed that is capable of controlling any well head pressure that is expected to be encountered while that BOP assembly is on the well. Casing and BOP installations should be in accordance with State regulatory agency requirements.

(7) *Oil drilling, production, or workover facilities (offshore)*. (i) Definition: "An oil drilling, production or workover facility (offshore)" may include all drilling or workover equipment, wells, flowlines, gathering lines, platforms, and auxiliary nontransportation-related equipment and facilities in a single geographical oil or gas field operated by a single operator.

(ii) Oil drainage collection equipment should be used to prevent and control small oil spillage around pumps, glands, valves, flanges, expansion joints, hoses, drain lines, separators, treaters, tanks, and allied equipment. Drains on the facility should be controlled and directed toward a central collection sump or equivalent collection system sufficient to prevent discharges of oil into the navigable waters of the United States. Where drains and sumps are not practicable oil contained in collection equipment should be removed as often as necessary to prevent overflow.

(iii) For facilities employing a sump system, sump and drains should be adequately sized and a spare pump or equivalent method should be available to remove liquid from the sump and assure that oil does not escape. A regular scheduled preventive maintenance inspection and testing program should be employed to assure reliable operation of the liquid removal system and pump start-up device. Redundant automatic sump pumps and control devices may be required on some installations.

(iv) In areas where separators and treaters are equipped with dump valves whose predominant mode of failure is in the closed position and pollution risk is high, the facility should be specially equipped to prevent the escape of oil. This could be accomplished by extending the flare line to a diked area if the separator is near shore, equipping it with a high liquid level sensor that will automatically shut-in wells producing to the separator, parallel redundant dump valves, or other feasible alternatives to prevent oil discharges.

(v) Atmospheric storage or surge tanks should be equipped with high liquid level sensing devices or other acceptable alternatives to prevent oil discharges.

(vi) Pressure tanks should be equipped with high and low pressure sensing devices to activate an alarm and/or control the flow or other acceptable alternatives to prevent oil discharges.

(vii) Tanks should be equipped with suitable corrosion protection.

(viii) A written procedure for inspecting and testing pollution prevention equipment and systems should be prepared and maintained at the facility. Such procedures should be included as part of the SPCC Plan.

(ix) Testing and inspection of the pollution prevention equipment and systems at the facility should be conducted by the owner or operator on a scheduled periodic basis commensurate with the complexity, conditions and circumstances of the facility or other appropriate regulations.

(x) Surface and subsurface well shut-in valves and devices in use at the facility should be sufficiently described to determine method of activation or control, e.g., pressure differential, change in fluid or flow conditions, combination of pressure and flow, manual or remote control mechanisms. Detailed records for each well, while not necessarily part of the plan should be kept by the owner or operator.

(xi) Before drilling below any casing string, and during workover operations a blowout preventer (BOP) assembly and well control system should be installed that is capable of controlling any wellhead pressure that is expected to be encountered while that BOP assembly is on the well. Casing and BOP installations should be in accordance with State regulatory agency requirements.

(xii) Extraordinary well control measures should be provided should emergency conditions, including fire, loss of control and other abnormal conditions, occur. The degree of control system redundancy should vary with hazard exposure and probable consequences of failure. It is recommended that surface shut-in systems have redundant or "fail close" valving. Subsurface safety valves may not be needed in producing wells that will not flow but should be installed as required by applicable State regulations.

(xiii) In order that there will be no misunderstanding of joint and separate duties and obligations to perform work in a safe and pollution free manner, written instructions should be prepared by the owner or operator for contractors and subcontractors to follow whenever contract activities include servicing a well or systems appurtenant to a well or pressure vessel. Such instructions and procedures should be maintained at the offshore production facility. Under certain circumstances and conditions such contractor activities may require the presence at the facility of an authorized representative of the owner or operator who would intervene when necessary to prevent a spill event.

(xiv) All manifolds (headers) should be equipped with check valves on individual flowlines.

(xv) If the shut-in well pressure is greater than the working pressure of the flowline and manifold valves up to and including the header valves associated with that individual flowline, the flowline should be equipped with a high pressure sensing device and shutin valve at the wellhead unless provided with a pressure relief system to prevent over pressuring.

(xvi) All pipelines appurtenant to the facility should be protected from corrosion. Methods used, such as protective coatings or cathodic protection, should be discussed.

(xvii) Sub-marine pipelines appurtenant to the facility should be adequately protected against environmental stresses and other activities such as fishing operations.

(xviii) Sub-marine pipelines appurtenant to the facility should be in good operating condition at all times and inspected on a scheduled periodic basis for failures. Such inspections should be documented and maintained at the facility.

(8) *Inspections and records*. Inspections required by this part should be in accordance with written procedures developed for the facility by the owner or operator. These written procedures and a record of the inspections, signed by the appropriate supervisor or inspector, should be made part of the SPCC Plan and maintained for a period of three years.

(9) *Security (excluding oil production facilities)*. (i) All plants handling, processing, and storing oil should be fully fenced, and entrance gates should be locked and/or guarded when the plant is not in production or is unattended.

(ii) The master flow and drain valves and any other valves that will permit direct outward flow of the tank's content to the surface should be securely locked in the closed position when in non-operating or non-standby status.

(iii) The starter control on all oil pumps should be locked in the "off" position or located at a site accessible only to authorized personnel when the pumps are in a non-operating or non-standby status.

(iv) The loading/unloading connections of oil pipelines should be securely capped or blank-flanged when not in service or standby service for an extended time. This security practice should also apply to pipelines that are emptied of liquid content either by draining or by inert gas pressure.

(v) Facility lighting should be commensurate with the type and location of the facility. Consideration should be given to: (A) Discovery of spills occurring during hours of darkness, both by operating personnel, if present, and by non-operating personnel (the general public, local police, etc.) and (B) prevention of spills occurring through acts of vandalism.

(10) *Personnel, training and spill prevention procedures.* (i) Owners or operators are responsible for properly instructing their personnel in the operation and maintenance of equipment to prevent the discharges of oil and applicable pollution control laws, rules and regulations.

(ii) Each applicable facility should have a designated person who is accountable for oil spill prevention and who reports to line management.

(iii) Owners or operators should schedule and conduct spill prevention briefings for their operating personnel at intervals frequent enough to assure adequate understanding of the SPCC Plan for that facility. Such briefings should highlight and describe known spill events or failures, malfunctioning components, and recently developed precautionary measures.

APPENDIX

Memorandum of Understanding between the Secretary of Transportation and the Administrator of the Environmental Protection Agency.

SECTION II—DEFINITIONS

E-6

The Environmental Protection Agency and the Department of Transportation agree that for the purposes of Executive Order 11548, the term:

(1) "Non-transportation-related onshore and offshore facilities" means:

(A) Fixed onshore and offshore oil well drilling facilities including all equipment and appurtenances related thereto used in drilling operations for exploratory or development wells, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(B) Mobile onshore and offshore oil well drilling platforms, barges, trucks, or other mobile facilities including all equipment and appurtenances related thereto when such mobile facilities are fixed in position for the purpose of drilling operations for exploratory or development wells, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(C) Fixed onshore and offshore oil production structures, platforms, derricks, and rigs including all equipment and appurtenances related thereto, as well as completed wells and the wellhead separators, oil separators, and storage facilities used in the production of oil, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(D) Mobile onshore and offshore oil production facilities including all equipment and appurtenances related thereto as well as completed wells and wellhead equipment, piping from wellheads to oil separators, oil separators, and storage facilities used in the production of oil when such mobile facilities are fixed in position for the purpose of oil production operations, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(E) Oil refining facilities including all equipment and appurtenances related thereto as well as in-plant processing units, storage units, piping, drainage systems and waste treatment units used in the refining of oil, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(F) Oil storage facilities including all equipment and appurtenances related thereto as well as fixed bulk plant storage, terminal oil storage facilities, consumer storage, pumps and drainage systems used in the storage of oil, but excluding inline or breakout storage tanks needed for the continuous operation of a pipeline system and any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(G) Industrial, commercial, agricultural or public facilities which use and store oil, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(H) Waste treatment facilities including in-plant pipelines, effluent discharge lines, and storage tanks, but excluding waste treatment facilities located on vessels and terminal storage tanks and appurtenances for the reception of oily ballast water or tank washings from vessels and associated systems used for off-loading vessels.

(I) Loading racks, transfer hoses, loading arms and other equipment which are appurtenant to a nontransportation-related facility or terminal facility and which are used to transfer oil in bulk to or from highway vehicles or railroad cars.

(J) Highway vehicles and railroad cars which are used for the transport of oil exclusively within the confines of a nontransportation-related facility and which are not intended to transport oil in interstate or intrastate commerce.

(K) Pipeline systems which are used for the transport of oil exclusively within the confines of a nontransportation-related facility or terminal facility and which are not intended to transport oil in interstate or intrastate commerce, but excluding pipeline systems used to transfer oil in bulk to or from a vessel.

(2) "transportation-related onshore and offshore facilities" means:

(A) Onshore and offshore terminal facilities including transfer hoses, loading arms and other equipment and appurtenances used for the purpose of handling or transferring oil in bulk to or from a vessel as well as storage tanks and appurtenances for the reception of oily ballast water or tank washings from vessels, but excluding terminal waste treatment facilities and terminal oil storage facilities.

(B) Transfer hoses, loading arms and other equipment appurtenant to a nontransportation-related facility which is used to transfer oil in bulk to or from a vessel.

(C) Interstate and intrastate onshore and offshore pipeline systems including pumps and appurtenances related thereto as well as in-line or breakout storage tanks needed for the continuous operation of a pipeline system, and pipelines from onshore and offshore oil production facilities, but excluding onshore and offshore piping from wellheads to oil separators and pipelines which are used for the transport of oil exclusively within the confines of a nontransportation-related facility or terminal facility and which are not intended to transport oil in interstate or intrastate commerce or to transfer oil in bulk to or from a vessel.

(D) Highway vehicles and railroad cars which are used for the transport of oil in interstate or intrastate commerce and the equipment and appurtenances related thereto, and equipment used for the fueling of locomotive units, as well as the rights-of-way on which they operate. Excluded are highway vehicles and railroad cars and motive power used exclusively within the confines of a nontransportation-related facility or terminal facility and which are not intended for use in interstate or intrastate commerce.

PART 113—LIABILITY LIMITS FOR SMALL ONSHORE STORAGE FACILITIES

Subpart A—Oil Storage Facilities

Sec.
113.1 Purpose.
113.2 Applicability.
113.3 Definitions.
113.4 Size classes and associated liability limits for fixed onshore oil storage facilities, 1,000 barrels or less capacity.
113.5 Exclusions.
113.6 Effect on other laws.

AUTHORITY: Sec. 311(f)(2), 86 Stat. 867, 33 U.S.C. 1251 (1972).

SOURCE: 38 FR 25440, Sept. 13, 1973, unless otherwise noted.

Subpart A—Oil Storage Facilities

§ 113.1 Purpose.

This subpart establishes size classifications and associated liability limits for small onshore oil storage facilities with fixed capacity of 1,000 barrels or less.

§ 113.2 Applicability.

This subpart applies to all onshore oil storage facilities with fixed capacity of 1,000 barrels or less. When a discharge to the waters of the United States occurs from such facilities and when removal of said discharge is performed by the United States Government pursuant to the provisions of subsection 311(c)(1) of the act, the liability of the owner or operator and the facility will be limited to the amounts specified in § 113.4.

§ 113.3 Definitions.

As used in this subpart, the following terms shall have the meanings indicated below:

(a) "Aboveground" storage facility means a tank or other container, the bottom of which is on a plane not more than 6 inches below the surrounding surface.

(b) "Act" means the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1151, et seq.

(c) "Barrel" means 42 United States gallons at 60 degrees Fahrenheit.

(d) "Belowground" storage facility means a tank or other container located other than as defined as "Aboveground".

(e) "Discharge" includes, but is not limited to any spilling, leaking, pumping, pouring, emitting, emptying or dumping.

(f) "Onshore Oil Storage Facility" means any facility (excluding motor vehicles and rolling stock) of any kind located in, on, or under, any land within the United States, other than submerged land.

(g) "On-Scene Coordinator" is the single Federal representative designated pursuant to the National Oil and Hazardous Substances Pollution Contingency Plan and identified in approved Regional Oil and Hazardous Substances Pollution Contingency Plans.

(h) "Oil" means oil of any kind or in any form, including but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil.

(i) "Remove" or "removal" means the removal of the oil from the water and shorelines or the taking of such other actions as the Federal On-Scene Coordinator may determine to be necessary to minimize or mitigate damage to the public health or welfare, including but not limited to, fish, shellfish, wildlife, and public and private property, shorelines, and beaches.

Additionally, the terms not otherwise defined herein shall have the meanings assigned them by sec. 311(a) of the act.

DEPARTMENT OF THE TREASURY

Office of Assistant Secretary for Administration, Department of the Treasury, Washington, D.C. 20220 964-5391

UPPER MISSISSIPPI RIVER BASIN COMMISSION

Office of the Chairman, Upper Mississippi River Basin Commission, Federal Office Building, Fort Snelling, Twin Cities, Minnesota 55111 (612) 725-4690

WATER RESOURCES COUNCIL

Office of the Associate Director, Water Resources Council, 2120 L Street, N.W., Suite 800, Washington, D.C. 20037 254-6442

APPENDIX IV—STATE AND LOCAL AGENCY REVIEW OF IMPACT STATEMENTS

1. OMB Circular No. A-95 through its system of clearinghouses provides a means for securing the views of State and local environmental agencies, which can assist in the preparation of impact statements. Under A-95, review of the proposed project in the case of federally assisted projects (Part I of A-95) generally takes place prior to the preparation of the impact statement. Therefore, comments on the environmental effects of the proposed project that are secured during this stage of the A-95 process represent inputs to the environmental impact statement.

2. In the case of direct Federal development (Part II of A-95), Federal agencies are required to consult with clearinghouses at the earliest practicable time in the planning of the project or activity. Where such consultation occurs prior to completion of the draft impact statement, comments relating to the environmental effects of the proposed action would also represent inputs to the environmental impact statement.

3. In either case, whatever comments are made on environmental effects of proposed Federal or federally assisted projects by clearinghouses, or by State and local environmental agencies through clearinghouses, in the course of the A-95 review should be attached to the draft impact statement when it is circulated for review. Copies of the statement should be sent to the agencies making such comments. Whether these agencies then elect to comment again on the basis of the draft impact statement is a matter to be left to the discretion of the commenting agency depending on its resources, the significance of the project, and the extent to which its earlier comments were considered in preparing the draft statement.

4. The clearinghouses may also be used, by mutual agreement, for securing reviews of the draft environmental impact statement. However, the Federal agency may wish to deal directly with appropriate State or local agencies in the review of impact statements because the clearinghouses may be unwilling or unable to handle this phase of the process. In some cases, the Governor may have designated a specific agency, other than the clearinghouse, for securing reviews of impact statements. In any case, the clearinghouses should be sent copies of the impact statement.

5. To aid clearinghouses in coordinating State and local comments, draft statements should include copies of State and local agency comments made earlier under the A-95 process and should indicate on the summary sheet those other agencies from which comments have been requested, as specified in Appendix I of the CEQ Guidelines.

(Footnote continued from previous page)

Rocky Mountain Region, Office of the Regional Director, Federal Aviation Administration, Park Hill Station, P.O. Box 7213, Denver, Colorado 80207 (303) 837-3646

Western Region, Office of the Regional Director, Federal Aviation Administration, P.O. Box 92007, WorldWay Postal Center, Los Angeles, California 90009 (213) 536-6247

Northwest Region, Office of the Regional Director, Federal Aviation Administration, FAA Building, Boeing Field, Seattle, Washington 98108 (206) 767-2780

FEDERAL HIGHWAY ADMINISTRATION

Region 1. Regional Administrator, Federal Highway Administration, 4 Normanskill Boulevard, Delmar, New York 12054 (518) 472-6476

Region 3. Regional Administrator, Federal Highway Administration, Room 1621, George H. Fallon Federal Office Building, 31 Hopkins Plaza, Baltimore, Maryland 21201 (301) 962-2361

Region 4. Regional Administrator, Federal Highway Administration, Suite 200, 1720 Peachtree Road, N.W., Atlanta, Georgia 30309 (404) 526-5078

Region 5. Regional Administrator, Federal Highway Administration, Dixie Highway, Homewood, Illinois 60430 (312) 799-6300

Region 6. Regional Administrator, Federal Highway Administration, 819 Taylor Street, Fort Worth, Texas 76102 (817) 334-3233

Region 7. Regional Administrator, Federal Highway Administration, P.O. Box 7186, Country Club Station, Kansas City, Missouri 64113 (816) 361-7563

Region 8. Regional Administrator, Federal Highway Administration, Room 242, Building 40, Denver Federal Center, Denver, Colorado 80225

Region 9. Regional Administrator, Federal Highway Administration, 450 Golden Gate Avenue, Box 36096, San Francisco, California 94102 (415) 556-3895.

Region 10. Regional Administrator, Federal Highway Administration, Room 412, Mohawk Building, 222 S.W. Morrison Street, Portland, Oregon 97204 (503) 221-2065

URBAN MASS TRANSPORTATION ADMINISTRATION

Region I. Office of the UMTA Representative, Urban Mass Transportation Administration, Transportation Systems Center, Technology Building, Room 277, 55 Broadway, Boston, Massachusetts 02142 (617) 494-2055

Region II. Office of the UMTA Representative, Urban Mass Transportation Administration, 26 Federal Plaza, Suite 1809, New York, New York 10007 (212) 264-8162

Region III. Office of the UMTA Representative, Urban Mass Transportation Administration, Mall Building, Suite 1214, 325 Chestnut Street, Philadelphia, Pennsylvania 19106 (215) 597-8107

Region IV. Office of UMTA Representative, Urban Mass Transportation Administration, 1720 Peachtree Road, Northwest, Suite 501, Atlanta, Georgia 30309 (404) 526-3948

Region V. Office of the UMTA Representative, Urban Mass Transportation Administration, 300 South Wacker Drive, Suite 700, Chicago, Illinois 60606 (312) 353-6005

Region VI. Office of the UMTA Representative, Urban Mass Transportation Administration, Federal Center, Suite 9E24, 1100 Commerce Street, Dallas, Texas 75202 (214) 749-7322

Region VII. Office of the UMTA Representative, Urban Mass Transportation Administration, c/o FAA Management Systems Division, Room 1564D, 601 East 12th Street, Kansas City, Missouri 64106 (816) 374-5567

Region VIII. Office of the UMTA Representative, Urban Mass Transportation Administration, Prudential Plaza, Suite 1822, 1050 17th Street, Denver, Colorado 80202 (303) 837-3242

Region IX. Office of the UMTA Representative, Urban Mass Transportation Administration, 450 Golden Gate Avenue, Box 36125, San Francisco, California 94102 (415) 556-2884

Region X. Office of the UMTA Representative, Urban Mass Transportation Administration, 1321 Second Avenue, Suite 5079, Seattle, Washington (206) 442-0590

PART 1510—NATIONAL OIL AND HAZARDOUS SUBSTANCES POLLUTION CONTINGENCY PLAN

Subpart A—Introduction

Sec.
1510.1 Authority.
1510.2 Purpose and objectives.
1510.3 Scope.
1510.4 Abbreviations.
1510.5 Definitions (within the meaning of this Plan).

Subpart B—Policy and Responsibility

1510.21 Federal policy.
1510.22 Federal responsibility.
1510.23 Non-Federal responsibility.

Subpart C—Planning and Response Organization

1510.31 Emergency response activities and coordination.
1510.32 National response team.
1510.33 National response center.
1510.34 Regional response team.
1510.35 Regional response center.
1510.36 On-scene coordination.

Subpart D—Operational—Response Phases

1510.40 Phase groupings.
1510.41 Phase I—Discovery and notification.
1510.42 Phase II—Evaluation and initiation of action.
1510.43 Phase III—Containment and countermeasures.
1510.44 Phase IV—Cleanup, mitigation and disposal.
1510.45 Phase V—Documentation and cost recovery.
1510.46 Special considerations.

Subpart E—Coordinating Instructions

1510.51 Delegation of authority.
1510.52 Multi-regional actions.
1510.53 General pattern of response actions.
1510.54 Strike force.

LIST OF ANNEXES

		Annex No.
1100	Distribution	I
1200	National Response Team	II
1300	National Response Center	III
1400	Geographical Boundaries	IV
1500	Communications and Reports	V
1600	Public Information	VI
1700	Legal Authorities	VII
1800	Documentation and Cost Recovery	VIII
1900	Funding	IX
2000	Dispersant Schedule	X
2100	Non-Federal Interests	XI
2500	Technical Information	XV

AUTHORITY: Sec. 311(c)(2), Public Law 92-500, 86 Stat. 865, 33 U.S.C. 1251, et seq.

SOURCE: 40 FR 6282, Feb. 10, 1975, unless otherwise noted.

Subpart A—Introduction

§ 1510.1 Authority.

This National Oil and Hazardous Substances Pollution Contingency Plan[1] has been developed in compliance with the Federal Water Pollution Control Act, as amended, (33 U.S.C. 1251, et seq.). The President delegated authority and responsibility to the Council on Environmental Quality to carry out subsection (c)(2) of section 311 of the Act, providing for the preparation, publication, revision and amendment of a National Contingency Plan for the removal of oil and hazardous substances.

§ 1510.2 Purpose of objectives.

(a) This Plan, including the Annexes, provides for a pattern of coordinated and integrated response by Departments and Agencies of the Federal Government to protect the environment from the damaging effects of pollution discharges. It promotes the coordination and direction of Federal and State response systems and encourages the development of local government and private capabilities to handle such discharges.

---

[1] This Plan supersedes the August 1973 edition.

(b) The objectives of this Plan are to provide for efficient, coordinated and effective action to minimize damage from oil and hazardous substance discharges, including containment, dispersal and removal. The Plan, including the Annexes and regional plans, provides for: (1) Assignment of duties and responsibility among Federal departments and agencies in coordination with State and local agencies; (2) identification, procurement, maintenance, and storage of equipment and supplies; (3) establishment or designation of a strike force to provide necessary services to carry out the Plan and establishment, at major ports, of trained and equipped emergency task forces; (4) a system of surveillance and reporting designed to insure the earliest possible notice of discharges of oil and hazardous substances to appropriate Federal agency; (5) establishment of a national center to provide coordination and direction for operations in carrying out the Plan; (6) procedures and techniques to be employed in identifying, containing, dispersing, and removing oil and hazardous substances; (7) a schedule, prepared in cooperation with the States, identifying dispersants and other chemicals, if any, that may be used in carrying out the Plan; and (8) a system whereby the State or States affected by a discharge may be reimbursed for reasonable costs incurred in the removal of such discharge.

§ 1510.3 Scope.

(a) This Plan is effective for the navigable waters of the United States (section 502(7) of the Act) and adjoining shorelines and for the contiguous zone and the high seas where a threat to the United States waters, shoreface, or shelf-bottom exists.

(b) The provisions of this Plan are applicable to all Federal Agencies. Implementation of this Plan is compatible with and complementary to the Joint U.S./Canadian Contingency Plan including the annexes pertaining to the Great Lakes, Eastern and Western coastal areas; International assistance plans and agreements, security regulations, and responsibilities based upon Federal statutes and Executive Orders.

§ 1510.4 Abbreviations.

(a) *Department and Agency title abbreviations.*

AEC—Atomic Energy Commission
CEQ—Council on Environmental Quality
Commerce—Department of Commerce
Corps—U.S. Army Corps of Engineers
DHEW—Department of Health, Education and Welfare
DOD—Department of Defense
DOI—Department of Interior
DOT—Department of Transportation
EPA—Environmental Protection Agency
FDAA—Federal Disaster Assistance Administration
HUD—Department of Housing and Urban Development
Justice—Department of Justice
MarAd—Maritime Administration
NOAA—National Oceanic and Atmospheric Administration
State—Department of State
USCG—U.S. Coast Guard
USGS—U.S. Geological Survey
USN—U.S. Navy

(b) *Operational title abbreviations.*

NRC—National Response Center
NRT—National Response Team
OSC—On-Scene Coordinator
RRC—Regional Response Center
RRT—Regional Response Team

§ 1510.5 Definitions (within the meaning of this Plan).

(a) Act—means the Federal Water Pollution Control Act, PL 92-500 (86 Stat. 816).

(b) Discharge—includes but is not limited to any spilling, leaking, pumping, pouring, emitting, emptying or dumping. (For the purposes of this Plan, discharges permitted pursuant to sections 301, 302, 306, 318, 402 or 404 of the Act or section 102 of PL 92-532 are not included.)

(c) On-Scene Coordinator (O.S.C.)—means the Federal official pre-designated by the EPA or the USCG to coordinate and direct Federal discharge removal efforts under Regional Contingency Plans at the scene of an oil or hazardous substance discharge.

(d) United States—means the States, the District of Columbia, the Commonwealth of Puerto Rico, the Canal Zone, Guam, American Samoa, the Virgin Islands, and the Trust Territory of the Pacific Islands.

(e) Coastal waters—generally are those U.S. waters navigable by deep draft vessels, the contiguous zone, the high seas and other waters subject to tidal influence.

(f) Inland waters—generally are those waters upstream from coastal waters (paragraph (e) of this section).

(g) Contiguous Zone—means the entire zone established by the United States under Article 24 of the Convention on the Territorial Sea and the Contiguous Zone. This is the zone contiguous to the territorial sea which extends 12 miles seaward from the baseline from which the territorial sea is measured.

(h) Public health or welfare—includes consideration of all factors affecting the health and welfare of man, including but not limited to human health, the natural environment, fish, shellfish, wildlife, and public and private property, shorelines and beaches.

(i) Major Disaster—means any hurricane, tornado, storm, flood, high water, wind-driven water, tidal wave, earthquake, drought, fire, or other catastrophe in any part of the United States which, in the determination of the President, is or threatens to become of sufficient severity and magnitude to warrant disaster assistance by the Federal Government to supplement the efforts and available resources of States and local governments and relief organizations in alleviating the damage, loss, hardship or suffering caused thereby.

(j) Oil—means oil of any kind or in any form, including but not limited to, petroleum, fuel oil, sludge, oil refuse and oil mixed with wastes other than dredged spoil.

(k) Hazardous substance—means any substance designated pursuant to subsection (b)(2) of section 311 of the Act.

(l) Size Classes of Discharges—The following classifications are provided for the guidance of the OSC and serve as the criteria for actions as delineated in § 1510.53. They are not meant to imply or connote associated degrees of hazard to the public health or welfare, or a measure of environmental damage. A discharge that poses a substantial threat to the public health or welfare, or results in critical public concern shall be classed as a major discharge notwithstanding the following quantitative measures.

(1) Minor discharge is a discharge to the inland waters of less than 1000 gallons of oil; or, to the coastal waters, a discharge of less than 10,000 gallons of oil.

(2) Medium discharge is a discharge of 1,000 to 10,000 gallons of oil to the inland waters, or 10,000 to 100,000 gallons of oil to the coastal waters, or a discharge of a hazardous substance in a harmful quantity as defined by regulations.

(3) Major discharge is a discharge of more than 10,000 gallons of oil to the inland waters or more than 100,000 gallons of oil to the coastal waters, or a discharge of a hazardous substance that poses a substantial threat to the public health or welfare.

(m) Potential discharge—is any accident or other circumstance which threatens to result in the discharge of oil or hazardous substance. A potential discharge shall be classified by its severity based on the guidelines above.

(n) Primary Agencies—are those Departments or Agencies comprising the NRT and designated to have primary responsibility and resources to promote effective operation of this Plan. These agencies are: Commerce, DOD, DOI, DOT, and EPA.

(o) Advisory Agencies—are those Departments or Agencies which can make major contributions during response activities for certain types of discharges. These Agencies are: AEC, DHEW, Justice, OEP and State.

(p) Remove or Removal—is the removal of oil or hazardous substance from the water and shorelines or the taking of such other actions as may be necessary to minimize or mitigate damage to the public health or welfare. For purposes of this Plan, removal refers to Phase III and IV response operations.

Subpart B—Policy and Responsibility

§ 1510.21 Federal policy.

(a) The Congress has declared that it is the policy of the United States that there should be no discharge of oil or hazardous substance into or upon the navigable waters of the United States, adjoining shorelines, or into or upon the waters of the contiguous zone (section 311(b)(1) of the Act).

(b) The primary thrust of this Plan is to provide a coordinated Federal response capability at the scene of an unplanned or sudden, and usually accidental, discharge of oil or hazardous substance that poses a threat to the public health or welfare. Initial actions taken by the Federal OSC, designated pursuant to § 1510.36 of this Plan and the appropriate regional contingency plan, shall be to determine in accordance with section 311(c)(1) of the Act. If the actions taken by the person responsible for the discharge of oil or hazardous substance are proper to remove the discharge. The OSC should, if practicable, insure that the person responsible for the discharge is aware of his responsibility and is encouraged to undertake necessary countermeasures. In the event that the person responsible for the discharge does not act promptly, does not take or propose to take proper and appropriate actions to remove the discharged pollutants, or if the person responsible for the discharge is unknown, further Federal response actions shall be instituted as required in accordance with this Plan. When the person responsible for the discharge is taking proper action, the OSC shall observe and monitor progress, and provide advice, counsel, and logistical support as may be necessary.

(c) Removal actions taken pursuant to section 311(c)(1) of the act are limited to the navigable waters of the United States, adjoining shorelines and the waters of the contiguous zone. Removal actions within the Contiguous zone are limited and do not include those covered by the Outer Continental Shelf Lands Act. When a discharge or potential discharge that poses a threat to the waters of the U.S. occurs outside the jurisdiction under section 311(c) of the Act, the procedures of this plan apply to the extent practicable and removal action will be accomplished pursuant to other Agency authorities. Removal actions for non-vessel discharges on the outer continental shelf, shall be in accordance with the August 1971 DOI/DOT Memorandum of Understanding.

(d) In accordance with section 311(d), whenever a marine disaster in or upon the navigable waters of the United States has created a substantial threat of pollution hazard to the public health or welfare, because of a discharge, or an imminent discharge, of large quantities of oil, or of a hazardous substance from a vessel, the United States may: (1) Coordinate and direct all public and private efforts directed at the removal or elimination of such threat; and (2) summarily remove and, if necessary, destroy such vessel by whatever means are available without regard to any provisions of law governing the employment of personnel or the expenditure of appropriated funds. This authority has been delegated to the Administrator of EPA and the Secretary of the Department in which the Coast Guard is operating, respectively, in and for the waters for which each has responsibility to furnish or provide the OSC under this Plan.

(e) In addition to any other actions taken by a State or local government, when the Administrator of EPA or the Secretary of the Department in which the Coast Guard is operating determines there is an imminent and substantial threat to the public health and welfare because of an actual or threatened discharge of oil or hazardous substance into or upon the waters of the United States from any onshore or offshore facility, he may require, through the Attorney General, that the U.S. Attorney of the district in which the threat occurs secure such relief as may be necessary to abate such threat. This authority could be exercised on request of the NRT.

(f) The Federal agencies possessing facilities or other resources which may be useful in a Federal response situation will make such facilities or resources available for use in accordance with this Plan, as supplemented by the regional plans, and as consistent with operational requirements, within the limits of existing statutory authority, and within the spirit of the President's intention to minimize discharges and their effects when they do occur.

(g) Environmental pollution control techniques shall be employed in accordance with applicable regulations and guidelines, and regional contingency plans. In any circumstances not covered by regulations or regional contingency plans, the use of chemicals shall be in accordance with Annex X and must have the concurrence of the EPA representative or alternate representative on the RRT; or in his absence the concurrence of the appropriate EPA Regional Administrator.

(h) Response operations carried out to remove discharges originating from Outer Continent Shelf Lands Act operations shall be in accordance with the August 1971 Memorandum of Understanding between DOI and DOT concerning respective responsibilities under this Plan.

§ 1510.22 Federal responsibility.

(a) Each of the Primary and Advisory Federal Agencies has responsibilities established by statute, Executive Order or Presidential Directive which may bear on the Federal response to a pollution discharge. This Plan intends to promote the expeditious and harmonious discharge of these responsibilities through the recognition of authority for action by those Agencies having the most appropriate capability to act in each specific situation. Responsibilities and authorities of these several agencies relevant to the control of pollution discharges are detailed in Annex VII to this part. In the development of the regional plans, provision shall be made to assure recognition of the statutory responsibilities of all involved Agencies.

(b) The Council on Environmental Quality is responsible for the preparation, publication, revision and amendment of this National Contingency Plan. The Council will receive the advice of the NRT on necessary changes to the Plan and shall insure that any disagreements arising among members of the NRT are expeditiously settled.

(c) The Department of Commerce, through NOAA, provides support to the NRT, RRT and OSC with respect to: Marine environmental data; living marine resources; current and predicted meteorological, hydrologic and oceanographic conditions for the high seas, coastal and inland waters; and maps and charts, including tides and currents for coastal and territorial waters and the Great Lakes. When requested by NRT, MARAD will provide advice on the design, construction and operation of merchant ships.

(d) The Department of Defense, consistent with its operational requirements, may provide assistance in critical pollution discharges and in the maintenance of navigation channels, salvage, and removal of navigation obstructions.

(e) The Department of Health, Education, and Welfare is responsible for providing expert advice and assistance relative to those discharges or potential discharges that constitute or may constitute a threat to public health and safety.

(f) The Department of Housing and Urban Development, through FDAA, maintains an awareness of pollution emergencies and evaluates any request for a major disaster declaration received from a Governor of a State pursuant to Pub. L. 93-288. If the President declares that a pollution emergency constitutes a major disaster or that a major disaster is imminent as defined by Pub. L. 93-288, the Administrator, FDAA, will coordinate and direct the Federal response.

(g) The Department of Interior, through the USGS, supplies expertise in the fields of oil drilling, producing, handling, and pipeline transportation. Also, the USGS has access to and supervision over continuously manned facilities which can be used for command, control and surveillance of discharges occurring from operations conducted under the Outer Continental Shelf Lands Act. Additionally, the Department of Interior will provide, through its Regional Coordinators, technical expertise to the OSC and RRT with respect to land, fish and wildlife, and other resources for which it is responsible. DOI is also responsible for American Samoa and the Trust Territory.

(h) The Department of Justice can supply expert legal advice to deal with complicated judicial questions arising from discharges and Federal agency responses.

(i) The Department of Transportation provides expertise regarding all modes of transporting oil and hazardous substances. Through the USCG, DOT supplies support and expertise in the domestic/international fields of port safety and security, marine law enforcement, navigation, and construction; manning, operation, and safety of vessels and marine facilities. Additionally, the Coast Guard maintains continuously manned facilities that are capable of command, control, and surveillance for oil discharges occurring on the waters of the United States or the high seas. The USCG is responsible for chairing the RRT and for implementing, developing and revising, as necessary, the regional plans for those areas where it is assigned the responsibility to furnish or provide for OSC's (§ 1510.36(b)).

(j) The Department of State will provide leadership in developing joint international contingency plans. It will also provide assistance in coordination when a pollution discharge transects international boundaries or involves foreign flag vessels.

(k) The Atomic Energy Commission is the designated Agency for administration, implementation and coordination of the Interagency Radiological Assistance Plan (IRAP). AEC will provide advice and assistance to the NRT with respect to the identification of the source and extent of radioactive contamination, and removal and disposal of radioactive discharges.

(l) The Environmental Protection Agency, through the Office of Water and Hazardous Materials, provides expertise regarding environmental effects of pollution discharges and environmental pollution control techniques, including assessment of damages. EPA shall also advise the RRT and OSC of the degree of hazard a particular discharge poses to the public health and safety. EPA is responsible for chairing the RRT and for development, revision and implementation, as necessary, of regional plans for those areas in which it has responsibility to furnish or provide for the OSC (§ 1510.36(b)). EPA will provide guidance to and coordinate with DOT regarding pollution control and protection of the environment in the preparation of regional plans.

(m) All Federal agencies are responsible for minimizing the occurrence of discharges and for developing the capability to respond promptly in cases of discharges from facilities they operate or supervise, and for making resources available for Federal pollution response operations.

(n) In addition to paragraph (m) of this section, Primary Agencies are responsible for:

(1) Leading all Federal agencies in programs to minimize the number of and environmental damage associated with discharges from facilities they operate or supervise;

(2) Providing representation to the NRT and the RRT's;

(3) Developing, within their operating elements, the capability for a rapid, coordinated response to any pollution discharge;

(4) Making information available to the NRT, RRT or OSC as necessary; and

(5) Keeping NRT and the RRT's informed, consistent with national security considerations, of changes in the availability of resources that would affect the operation of this Plan.

§ 1510.23 Non-Federal responsibility:

(a) The States are invited to provide liaison to RRT's and shall designate the appropriate element of the State government that would undertake direction of State supervised discharge removal operations. The designated agency shall be the single State governmental element that will seek reimbursement for removal operation expenditures in accordance with section 311(c)(2)(H) of the act. Details on reimbursement to States for removal actions taken pursuant to this Plan are contained in 33 CFR, Part 153 and Annex IX—Funding.

(b) Industry groups, the academic community, and others are encouraged to commit resources for removal operations. Their specific commitments are outlined by the regional plans. Of particular relevance is the organization of a standby scientific response capability.

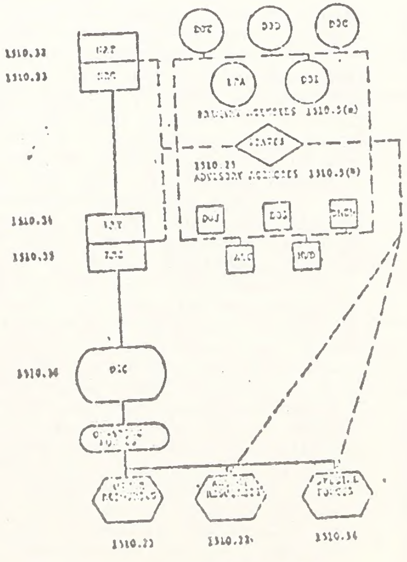
Subpart C—Planning and Response Organization

§ 1510.31 Emergency response activities and coordination.

(a) For pollution emergency response activities, Federal on-scene coordination is accomplished through the OSC. He reports to and receives advice from an RRT composed of appropriate representatives from the Regional and District offices of the Primary and Advisory Agencies.

(b) National level coordination is accomplished through the NRT which receives reports from and renders advice to the RRT. Activities are coordinated through the National and various regional response centers.

(c) The organizational concepts of this Plan are shown on Figure 1.



(NUMBERS REFER TO SECTIONS OF THIS PLAN)

FIG. 1

§ 1510.32 National response team.

(a) The NRT consists of representatives from the Primary and Advisory Agencies. It serves as the National body for planning and preparedness actions prior to a pollution discharge and for coordination and advice during a pollution emergency. It shall be organized and shall function as outlined in Annex II to this part.

(b) The NRT shall establish and maintain a Committee on Revision of the National Plan. This Committee shall provide suggested revisions to the NRT for consideration, approval and publication by CEQ. The Primary Agencies shall provide membership on this standing committee. Advisory Agencies shall participate whenever revision or proposed amendments would affect those Agencies. Ad hoc committees may also be established from time to time to consider various matters. Membership on these committees shall consist of the representatives from the Primary Agencies and such Advisory Agencies that may have direct involvement.

(c) Based on a continuing evaluation of response actions, the NRT shall consider and make recommendations to appropriate agencies relating to training and equipping response team personnel; necessary research, development, demonstration and evaluation activities to improve response capabilities; and equipment, material stockpiling and other operational matters as the need arises. CEQ shall be advised of any agency's failure to adequately respond to these recommendations.

(d) During pollution emergencies, NRT shall act as an emergency response team comprised of representatives from the Primary and selected Advisory Agencies to be activated in accordance with section 1201.2, Annex II to this part.

§ 1510.33 National Response Center.

(a) The NRC, located at Headquarters, USCG, is the Washington, D.C. headquarters site for activities relative to pollution emergencies. NRC quarters are described in Annex III to this part, and provide communications, including a continuously manned communication center, information storage; and necessary personnel and facilities to promote the smooth and adequate functioning of this activity as described in Annex III to this part.

§ 1510.34 Regional Response Team.

(a) The RRT consists of regional representatives of the Primary and selected Advisory Agencies, as appropriate. RRT shall act within its region as an emergency response team performing response functions similar to those described for NRT. RRT will also perform review and advisory functions relative to the regional plan similar to those prescribed for NRT at the National level. Additionally, the RRT shall determine the duration and extent of the Federal response, and when a shift of on-scene coordination from the predesignated OSC to another OSC is indicated by the circumstances or progress of a pollution discharge.

(b) Each Primary Agency shall designate one member and a minimum of one alternate member to the RRT. Each Advisory Agency may designate a member. Agencies may also provide additional representatives as observers to meetings of the RRT. Individuals representing the participating agencies may vary depending on the subregional area in which the discharge occurred or removal actions are underway. Details of such representation are specified in each regional contingency plan.

(c) Each of the States lying within a region is invited to furnish liaison to the RRT for planning and preparedness activities. When the Team is activated for a pollution emergency, the affected State or States are invited to participate in RRT deliberations.

(d) The RRT shall be activated automatically in the event of a major or potential major discharge. The RRT shall be activated during any other pollution emergency by an oral request from any Primary Agency representative to the Chairman of the team. Such requests for team activation shall be confirmed in writing. The time of team activation, place of assembly, and means of contact shall be included in POLREPS submitted in accordance with Annex V to this part.

(e) The Chairman may require assembly of all or selected members of the team at the emergency center during a pollution response operation to provide technical support and assistance to the OSC.

(f) Deactivation of RRT shall be by agreement between the EPA and USCG team members. The time of deactivation shall be included in POLREPS submitted in accordance with Annex V to this part.

(g) Boundaries of the Standard Federal Regions as shown in Annex IV to this part shall be followed for the development of Regional Contingency Plans.

§ 1510.35 Regional Response Center.

(a) The RRC is the regional site for pollution emergency response activities. It will be accommodated in quarters described in each regional plan and will provide communications. Information storage and other necessary personnel and facilities to promote the proper functioning and administration of regional pollution emergency response operations.

§ 1510.36 On-Scene Coordination.

(a) Coordination and direction of Federal pollution control efforts at the scene of a discharge or potential discharge shall be accomplished through the OSC, predesignated by regional plan to coordinate and direct such pollution control activities in each area of the region.

(1) In the event of a discharge of oil or hazardous substance, the first official on the site from an agency having responsibility under this Plan shall assume coordination of activities under the Plan until the arrival of the predesignated OSC.

(2) The OSC shall determine pertinent facts about a particular discharge, such as its potential impact on human health and welfare; the nature, amount, and location of material discharged; the probable direction and time of travel of the material; the resources and installations which may be affected and the priorities for protecting them.

(3) The OSC shall initiate and direct as required Phase II, Phase III and Phase IV operations. Advice provided by the EPA representative on the RRT on use of chemicals in Phase III and Phase IV operations in response to discharges of oil or hazardous substances shall be binding on the OSC, except as provided for by Annex X to this part.

(4) The OSC shall call upon and direct the deployment of needed resources in accordance with the regional plan to evaluate the magnitude of the discharge and to initiate and continue removal operations.

(5) The OSC shall provide necessary support activities and documentation for Phase V activities.

(6) In carrying out this Plan, the OSC will fully inform and coordinate closely with RRT to ensure the maximum effectiveness of the Federal effort in protecting the natural resources and the environment from pollution damage.

(b) EPA and the USCG shall insure that OSC's are predesignated for all areas within the region in accordance with the following criteria:

(1) The EPA shall furnish or provide for OSC's on inland waters.

(2) The USCG shall furnish or provide for OSC's for the coastal waters, and for Great Lakes waters, ports and harbors.

(3) The major consideration in selection of the OSC shall be based upon that Agency's capability and resources for pollution control response activities and the individual OSC's knowledge of the National Contingency Plan and the appropriate Regional Contingency Plan.

(c) All Federal agencies are required by executive order to develop emergency plans and procedures for dealing with accidental pollution. All Federal agencies, therefore, are responsible for designating the officer to coordinate response actions for facilities or vessels under their jurisdiction and for the provision of means to remove or mitigate the effects of discharges from their facilities. If the responsible Agency does not act promptly or take appropriate action, the EPA or USCG shall, depending on the area in which the discharge occurs, assume the OSC functions. Pollution control actions taken must be in accordance with Federal regulations and guidelines, EPA policies and this Plan.

Subpart D—Operational—Response Phases

§ 1510.40 Phase groupings.

The actions taken to respond to a pollution discharge can be separated into five relatively distinct classes or phases. For descriptive purposes, these are: Phase I—Discovery and Notification; Phase II—Evaluation and Initiation of Action; Phase III—Containment and Countermeasures; Phase IV—Removal, Mitigation and Disposal; and Phase V—Documentation and Cost Recovery. It must be recognized that elements of any one phase may take place concurrently with one or more other phases.

§ 1510.41 Phase I—Discovery and notification.

(a) A discharge may be discovered through: (1) A report submitted by a discharger in accordance with statutory requirements; (2) through deliberate search by vessel patrols and aircraft; and (3) through random or incidental observations by government agencies or the general public.

(b) In the event of a deliberate discovery, the discharge will be reported directly to the RRC. Reports of random discovery may be provided by fishing or pleasure boats, police department, telephone operators, port authorities, news media, or others. Reports generated by random discovery should be submitted to the nearest USCG or EPA office. Regional plans shall provide for such reports to be channeled to the RRC as promptly as possible to facilitate effective response action. Reports of major and medium discharges received by either EPA or USCG shall be expeditiously relayed by telephone to the other agency. Reports of minor discharges shall be exchanged between EPA and USCG as agreed to by the two agencies.

(c) The Agency furnishing the OSC for a particular area is assigned responsibility for implementing Phase I activities in that area.

§ 1510.42 Phase II—Evaluation and initiation of action.

(a) The OSC shall insure that a report of a discharge is immediately investigated. Based on all available information, the OSC shall: (1) Evaluate the magnitude and severity of the discharge; (2) determine the feasibility of removal; and (3) assess the effectiveness of removal actions.

(b) The OSC shall, when appropriate and as soon as possible after receipt of a report, advise the RRC of the need to initiate further governmental response actions. This may be limited to activation of the RRT or a request for additional resources to conduct further surveillance or initiation of Phase III or Phase IV removal operations.

(c) The OSC shall insure that adequate surveillance is maintained to determine that removal actions are being properly carried out. If removal is not being done properly, the OSC shall so advise the responsible party. If, after the responsible party has been advised and does not initiate proper removal action, the OSC shall, pursuant to section 311(c)(1) of the act, take necessary action to remove the pollutant.

(d) If the discharger is unknown or otherwise unavailable, the OSC shall proceed with removal actions pursuant to section 311(c)(1) of the act.

§ 1510.43 Phase III—Containment and countermeasures.

(a) These are defensive actions to be initiated as soon as possible after discovery and notification of a discharge. These actions may include public health and welfare protection activities, source control procedures, salvage operations, placement of physical barriers to halt or slow the spread of a pollutant, emplacement or activation of booms or barriers to protect specific installations or areas, control of the water discharge from upstream impoundments and the employment of chemicals and other materials to restrain the pollutant and its effects on water related resources.

§ 1510.44 Phase IV—Cleanup, mitigation and disposal.

(a) This includes actions taken to recover the pollutant from the water and affected public and private shoreline areas, and monitoring activities to determine the scope and effectiveness of removal actions. Actions that could be taken include the use of sorbers, skimmers and other collection devices for floating pollutants, the use of vacuum dredges or other devices for sunken pollutants; the use of reaeration or other methods to minimize or mitigate damage resulting from dissolved, suspended or emulsified pollutants; or special treatment techniques to protect public water supplies or wildlife resources from continuing damage.

(b) Pollutants and contaminated materials that are recovered in cleanup operations shall be disposed of in accordance with procedures agreed to at the State or local level.

§ 1510.45 Phase V—Documentation and cost recovery.

(a) This includes a variety of activities, depending on the location of and circumstances surrounding a particular discharge. Recovery of Federal removal costs and recovery for damage done to Federal, State or local government property is included; however, third party damages are not dealt with in this Plan. The collection of scientific and technical information of value to the scientific community as a basis for research and development activities and for the enhancement of understanding of the environment may also be considered in this phase. It must be recognized that the collection of samples and necessary data must be performed at the proper times during the case to fix liability and for other purposes.

§ 1510.46 Special considerations.

(a) *Safety of personnel.* Actual or potential polluting discharges that could have an imminent and substantial effect on both air and water media can pose serious hazards to personnel health and safety. The OSC should be aware of this potential and should exercise caution in allowing civilian or government personnel into the affected area without first verifying the nature of the substance discharged. Regional plans shall identify the sources of information on the hazards, precautions, and personnel protective requirements that will be expected in carrying out response operations. The means for OSC to secure such information also shall be included.

(b) *Waterfowl conservation.* Oil discharges, particularly in estuarine and near shore areas, often cause severe stress to resident and migratory bird species. The DOI representatives and the State liaison to the RRT shall arrange for and coordinate actions of professional and volunteer groups that wish to establish bird collection, cleaning and recovery centers. Regional contingency plans shall, to the extent practicable, identify organizations or institutions that can and are willing to establish and operate such facilities. These activities will normally be considered Phase IV responce actions (§ 1510.41 of this subpart).

Subpart E—Coordinating Instructions

§ 1510.51 Delegation of Authority.

(a) When required, delegation of authority or concurrence in proposed or continuing pollution control activities initially may be oral; however, written confirmation by the EPA representative on RRT should be completed as soon as possible.

§ 1510.52 Multi-regional actions.

(a) In the event that a discharge or a potential pollution emergency moves from the area covered by one contingency plan into another area, the authority to initiate pollution control actions shall shift as appropriate. In the event that a polluting discharge or potential pollution emergency affects areas covered by two or more regional plans, the response mechanism called for by both plans shall be activated; however, pollution control actions shall be fully coordinated as detailed in the regional plans.

(b) There shall be only one On-Scene Coordinator at any time during the course of a response operation. Should a discharge affect two or more areas, the RRT will designate the OSC, giving prime consideration to the area vulnerable to the greatest damage. NRT shall designate the OSC if members of one RRT or of two adjacent RRT's, if appropriate, are unable to agree on the designation.

§ 1510.53 General pattern of response actions.

(a) When the predesignated Federal On-Scene Coordinator receives a report of a discharge, or potential discharge, the report should be evaluated. In most situations, the sequence of actions shown below should be followed:

(1) Investigate the report to determine pertinent information such as the threat posed to public health or welfare, the type and quantity of material discharged, and the source of the discharge.

(2) Effect notification in accordance with Annex V to this part and the applicable regional plan.

(3) Determine, in accordance with section 311(c)(1) of the act, whether removal actions are being carried out properly. Removal is considered as being done properly when the following criteria are met:

(i) Private cleanup efforts are effective in terms of the statutory definition of removal, that is, they are fully sufficient to minimize or mitigate damage to the public health or welfare. Private removal efforts shall be deemed "improper" to the extent that Federal efforts are necessary to prevent continued or further damage.

(ii) Private removal efforts must be in accordance with applicable regulations and guidelines, and Annex X to this part and other provisions or restrictions of this Plan.

(4) Designate the severity of the situation and determine the future course of action to be followed.

(5) Determine whether State action to effect removal is necessary.

(b) The result of the report probably can be categorized by one of five classes. Appropriate action to be taken in each specific type case is outlined below:

(1) If the investigation shows that the initial information overstated the magnitude or danger of the discharge and there is no environmental pollution involved, it shall be considered a false alarm and the case should be closed.

(2) If the investigation shows a minor discharge with the discharger taking appropriate removal action, contact should be established with the discharger. The removal action should be monitored to insure continued proper action by the owner or operator of the vessel, onshore facility or offshore facility from which the discharge occurred.

(3) If the investigation shows a minor discharge with improper removal action being taken, the following measures shall be taken:

(i) An immediate effort should be made to prevent further discharges from the source.

(ii) The discharger shall be advised of the proper action to be taken.

(iii) If the discharger does not follow this advice, warning of the discharger's liability for the cost of removal, pursuant to section 311(f), shall be given. (See paragraph (a)(3) of this section).

(iv) The OSC should notify appropriate State and local officials. He shall keep the RRC advised and initiate Phase III and IV operations as conditions warrant.

(v) Information shall be collected for possible recovery of removal costs when removal is effected in accordance with section 311(c)(1) of the Act.

(4) When a report of investigation indicates that a medium discharge has occurred, or the potential for a medium discharge exists, the OSC shall follow the same general procedures as for a minor discharge. Additionally, the OSC shall make a recommendation concerning team activation to the Chairman of the RRT.

(5) When a report indicates that a major discharge has occurred, a potential major pollution emergency exists, or that a discharge or potential discharge which could arouse wide public concern has occurred, the OSC shall follow the same procedures as for minor and medium discharges. RRC and NRT shall, however, be notified immediately of the situation even if the initial report has not been confirmed.

§ 1510.54 Special forces.

(a) The National Strike Force (NSF) shall be established consisting of personnel trained, prepared, and available to provide necessary services to carry out this Plan. This NSF shall be formed around the Strike Teams established by the U.S. Coast Guard on the East, West, and Gulf coasts, and including the Environmental Response Team (ERT) established by the EPA, when required. The NSF shall provide assistance to the OSC during Phase III, IV, and V operations as the circumstances of the situation dictate. When possible, the NSF will provide training to the Emergency Task Forces and participate with the Regional Response Team in Regional Contingency Plan development.

(1) The Strike Teams established by the U.S. Coast Guard are able to provide communications support, advice and assistance for oil and hazardous substances removal. These teams include expertise in ship salvage, diving, and removal techniques and methodology.

(2) The Environmental Response Team established by EPA to carry out the Agency's disaster and emergency responsibilities can provide the OSC and NSF with advice on the environmental effects of oil and hazardous substances discharges, and removal and mitigation of the effects of such discharges. This team includes expertise in biology, chemistry, engineering and, when necessary, meteorology and oceanography.

(3) The Emergency Task Forces established pursuant to section 311(c)(2)(C) shall consist of trained personnel with adequate supplies of oil and hazardous pollution control equipment and materials and detailed discharge removal plans for their areas of responsibility. The Emergency Task Forces shall be established by the Agency responsible for providing the OSC not later than one year from the effective date of this Plan.

(4) The NSF and ERT will generally respond to requests for assistance from the OSC. Requests for the NSF may be made directly to the Commanding Officer of the appropriate Strike Team, the Coast Guard member on the RRT, the appropriate Area Commander, USCG, or to the Commandant, USCG, through the NRC. Requests for the EPA-ERT may be made to the EPA Emergency Coordinator or the appropriate Regional Emergency Coordinator (REC), or the EPA representative on the RRT.

Annex I—1100 Distribution

1101 Plan distribution.

1101.1 This Plan will be distributed to designated offices of Primary and Advisory Agencies, State and interstate water pollution control agencies and such other Federal, State, local and private agencies and organi-

E-12

zations which are cooperating with and participating in activities in support of the Plan.

1101.2 Included in this formal distribution are the following:

- Department of Commerce
- Department of Defense
- Department of Health, Education and Welfare
- Department of the Interior
- Department of Housing and Urban Development
- Department of Justice
- Department of State
- Department of Transportation
- Atomic Energy Commission
- All State water pollution control agencies
- All Interstate water pollution control agencies
- Other Federal, State, local and private agencies and organizations, as appropriate.

1101.3 Formal distribution of the Plan and amendments will be made by the Environmental Protection Agency.

1102 Amendment, distribution and format.

1102.1 Amendments to the Plan and annexes will be made by sequentially numbered changes. Numbered changes will be effected by means of a transmittal sheet which identifies the Plan, the change number and date, the page numbers affected by the change and any other instructions deemed necessary for purposes of clarity or to make special emphasis or explanation of the change. There will be attached to the transmittal sheet the revised or added pages with the change number and current date on each page at the upper right hand corner.

1102.2 Where a change can be effected merely by pen and ink, the transmittal sheet may be used to accomplish the change without submission of revised pages. The use of pen and ink changes is limited to those cases where existing matter is being deleted or is of minor extent.

1102.3 Asterisks will be used to indicate changes. For line changes, an asterisk will be placed before and after each sentence changed in the left and right page margins. For paragraph changes, an asterisk will be placed before and after each paragraph changed and if continued on the next page, an asterisk will be placed at the top of the page and the end of the paragraph. For a paragraph deletion, an asterisk will be placed in the left margin and the paragraph number or letter will be retained in the original sequence followed by the word "Rescinded" in parentheses.

1102.4 If the Plan is completely rewritten, asterisks will not be used but supercession will be indicated at the bottom of the first page.

ANNEX II—1200 NATIONAL RESPONSE TEAM

1201 National Response Team.

1201.1 The NRT consists of representatives from the Primary and Advisory Agencies. It serves as the National body for planning and preparedness actions prior to a pollution discharge and for coordination and advice during a pollution discharge.

1201.2 Membership on the NRT is established by § 1510.32(a). Each Primary and Advisory Agency shall designate a member to the team and sufficient alternates to insure representation in the event that the member is unavailable.

1202 NRT organization.

1202.1 Except for periods of activation because of a pollution incident, the representative of EPA shall be the Chairman and the representative of DOT shall be vice-chairman of NRT. The vice-chairman shall maintain records of the NRT activities along with National and regional plans for pollution response. When NRT is activated for a pollution incident, the Chairman shall be the representative of EPA or DOT, depending upon the area in which the response is taking place.

1203 NRT purpose.

1203.1 The NRT, when not activated for a pollution discharge, serves as a standing committee to recommend needed policy changes in the response organization, to revise this Plan as needed and to evaluate the preparedness of the Agencies and effectiveness of plans for coping with pollution discharges.

1203.2 The NRT shall act as an emergency response team to be activated in the event of a discharge involving oil or hazardous substances which (a) exceeds the response capability of the region in which it occurs; (b) transects regional boundaries; (c) involves significant numbers of persons or nationally significant amounts of property; or (d) when requested by any Primary Agency representative. Each representative, or an appropriate alternate, shall be notified immediately by telephone of activation of NRT.

1204 Responsibilities and functions.

1204.1 Planning and preparedness responsibilities of the NRT are to:

1204.1-1 Maintain a continuing review of regional pollution emergency response operations and equipment readiness to insure adequacy of regional and national planning, and coordination for combating discharges of oil and hazardous substances. NRT shall recommend revision of the National Contingency Plan to CEQ on the basis of observations of response operations;

1204.1-2 Review the functioning of the RRT's to insure that regional plans developed are fully coordinated among involved agencies. It shall serve as a body to which the RRT's may refer for settlement of matters which they cannot resolve;

1204.1-3 Develop procedures to promote the coordination of Federal, State and local governments and private agencies to respond to pollution incidents;

1204.1-4 Consider necessary changes in policy on the basis of continuing evaluation of regional response actions taken in combating discharges of oil and hazardous polluting substances;

1204.1-5 Provide information to the Research and Development Committee, on research requirements, the need for which is not known until discharges of unusual materials or unique circumstances occur;

1204.1-6 Maintain a continuing awareness of review and act upon reports by the Research and Development Committee;

1204.1-7 Maintain a readiness posture to respond to a nationally significant discharges of oil or other hazardous substance;

1204.1-8 Maintain a continuing surveillance of incoming reports from all RRT's and activate NRT when appropriate; and

1204.1-9 Meet quarterly on the first Thursday of March, June, September and December to review pollution emergency response actions of the preceding period, receive reports of the Committee on Revision and consider amendments to the Plan.

1204.2 When activated during a pollution discharge response, Agency representatives shall meet at the call of the Chairman and shall:

1204.2-1 Monitor and evaluate reports generated by the OSC insuring their completeness. Based on this evaluation, NRT may recommend courses of action in combating the discharge through RRT for consideration by the OSC.

1204.2-2 Request other Federal, State, local government or private agencies to consider taking action under their existing authorities to provide resources necessary for combating a discharge or deployment of personnel to monitor response operations.

1204.2-3 Coordinate the actions of regions or districts other than those affected by the pollution emergency to supply needed equipment, personnel, or technical advice to the RRT and OSC. This includes requests, when appropriate, for activating the Special Forces provided by § 1510.54 of the Plan.

1204.2-4 Act as the focal point for national public information releases and for information transfer between the OSC and the Washington, D.C. headquarters of the Agencies concerned, so as to minimize or prevent dissemination of spurious and incomplete information. Public information actions are discussed in Annex VI of this part.

ANNEX III—1300 NATIONAL RESPONSE CENTER

1301 National Response Center location.

1301.1 The National Response Center (NRC) for control of pollution by oil and hazardous substances is established at the Headquarters, United States Coast Guard, Washington, D.C.

1302 NRC purpose.

1302.1 The purpose of the NRC is to provide physical facilities for coordination and control of a pollution emergency should national level involvement be required.

1303 Responsibility for NRC.

1303.1 The Commandant, U.S. Coast Guard, shall provide the necessary communications and plotting facilities and equipment. These will include:

1303.1-1 A continuously manned communication center for receiving reports of discharges;

1303.1-2 Telephone branch lines;

1303.1-3 Teletypewriter circuits;

1303.1-4 The latest updated charts of the Department of Commerce, Interior and Defense for the U.S. waters, the Continental Shelf and the ocean areas adjacent to U.S. territorial waters;

1303.1-5 Technical library on oil and hazardous substances; pollution; and,

1303.1-6 Plotting and display provisions to visually depict the geographic position, movement and extent of the pollutant.

1303.2 Primary Agencies shall furnish competent technical personnel to man the NRC as requested, furnish appropriate technical manuals and materials, and such additional administrative support as required to operate the NRC effectively and efficiently.

1304 Communications services available.

1304.1 Telephone (voice) services available include:

1304.1-1 Commercial telephone available 24 hours per day, toll free (800) 424-8802;

1304.1-2 AUTOVON (Automated Voice Network)—General purpose switched voice network of Defense Communications Systems, which serves Continental U.S., Alaska, Europe, Pacific and Panama;

1304.1-3 Washington Tactical Switchboard—Pentagon terminal of the tactical telephone system, operated by USAF;

1304.1-4 FTS-GSA operated government administrative telephone system; and,

1304.1-5 SARTEL—Search and Rescue Command Coordination telephone network including leased Hotline telephone net extending from Halifax to New Orleans.

1304.2 Teletype writer services available include:

1304.2-1 AUTODIN—A defense communications worldwide high speed user data communications system operated for and managed by the DCA to provide both direct user-to-user and store and forward message switching service for DOD and other government agencies;

1304.2-2 SARLANT—Coast Guard-leased teletypewriter system extending from Massachusetts to Texas (used to control and coordinate SAR incidents and to handle other operational traffic and priority administrative communications);

1304.2-3 SARPAC—Same as (2) for the West Coast U.S.; and

1304.2-4 TELEX—Teletypewriter exchange service provided by Western Union that serves Continental U.S., industry and Government offices. TELEX also permits direct connections with international communication carriers and oversea TELEX communications.

E-13

1305.1 Information on current and predicted meteorological, hydrologic and oceanographic conditions for the high seas, coastal and inland waters is available from NOAA. If specific capabilities of other agency environmental description and prediction programs are required because of the area or unusual conditions, NOAA will arrange for the provision of such information.

ANNEX IV—1400 PRIMARY AGENCY OFFICE LOCATIONS AND BOUNDARIES

1400 Geographical boundaries.

Regional contingency plans shall be based upon the Standard Federal Regions. These plans are available for inspection at EPA regional offices or U.S. Coast Guard district offices as shown in 1401 and 1402. Other agencies' addresses and telephone numbers may be found in the United States Government Manual (issued annually) or in the local telephone directories of cities shown on the maps included in this Annex. EPA, HEW, and HUD regional geographical boundaries follow this delineation.

1401 Environmental Protection Agency—Office addresses, telephone numbers, and map.

1402 Department of Transportation—United States Coast Guard district offices addresses, telephone numbers and maps.

1403 Department of Commerce—map.

1404 Department of Defense—maps.

1404.1 U.S. Army Corps of Engineers.

1404.2 U.S. Army Continental Army Commands.

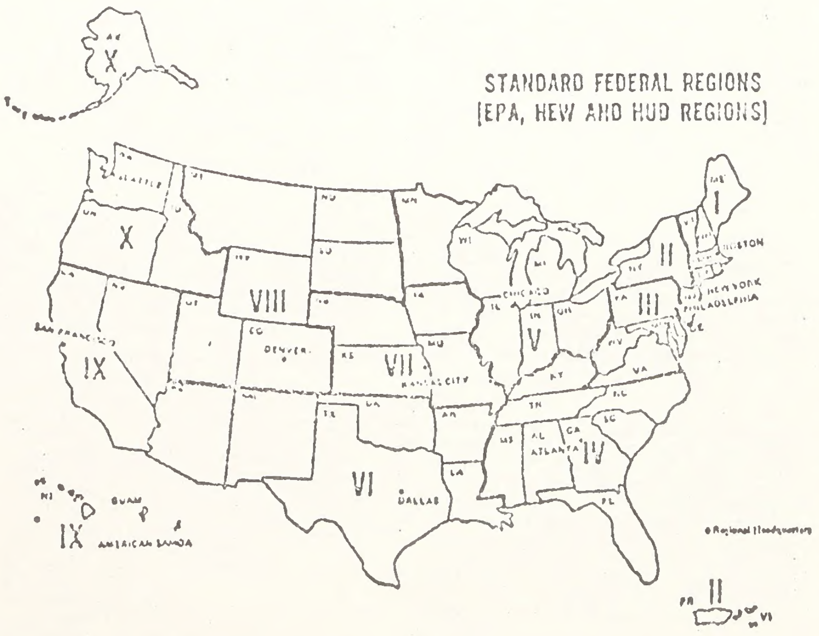
1404.3 U.S. Naval Districts.

1404.4 U.S. Air Force Reserve Regions.

1405 U.S. Department of the Interior.

1405.1 Field Committee Regions.

1405.2 U.S. Geological Survey—Area and District Offices—map.



STANDARD FEDERAL REGIONS
[EPA, HEW AND HUD REGIONS]

E-14

1401 ENVIRONMENTAL PROTECTION AGENCY REGIONAL OFFICES

Environmental Protection Agency
Region I, Room 2303
John F. Kennedy Federal Building
Boston, Massachusetts 02203
Tel: (617) 223-7265
Environmental Protection Agency
Regional II, Room 908
26 Federal Plaza
New York, New York 10007
Tel: (201) 648-3730
Environmental Protection Agency
Region III
Curtis Bldg.
6th and Walnut Streets
Philadelphia, Pennsylvania 19106
Tel: (215) 597-9898
Environmental Protection Agency
Region IV
1421 Peachtree St., NE.
Atlanta, Georgia 30309
Tel: (404) 526-5062
Environmental Protection Agency
Region V
230 South Dearborn Street
Chicago, Illinois 60604
Tel: (312) 896-7591
Environmental Protection Agency
Region VI, Suite 1600
1600 Patterson St.
Dallas, Texas 75201
Tel: (214) 749 3840
Environmental Protection Agency
Region VII
1735 Baltimore Ave.
Kansas City, Missouri 64108
Tel: (816) 374-3778
Environmental Protection Agency
Region VIII, Suite 900
1860 Lincoln Street
Denver, Colorado 80203
Tel: (303) 837-3880
Environmental Protection Agency
Region IX
100 California Street
San Francisco, California 94111
Tel: (415) 556-6254
Environmental Protection Agency
Region X
1200 Sixth Avenue
Seattle, Washington 98101
Tel: (206) 442-4343

1402 DEPARTMENT OF TRANSPORTATION U.S. COAST GUARD DISTRICTS

1st Coast Guard District
150 Causeway Street
Boston, Mass. 02114
Duty Officer: (617) 223-6650
2nd Coast Guard District
Federal Building
1520 Market Street
St. Louis, Mo. 63101
Duty Officer: (314) 622-4614
3rd Coast Guard District
Governors Island
New York, N.Y. 10004
Duty Officer: (212) 264-4800
5th Coast Guard District
Federal Building
431 Crawford Street
Portsmouth, Va. 23705
Duty Officer: (703) 393-9611
7th Coast Guard District
Room 1018, Federal Bldg.
51 S.W. 1st Avenue
Miami, Fla. 33130
Duty Officer: (305) 350-5611
8th Coast Guard District
Customhouse
New Orleans, La. 70130
Duty Officer: (504) 527-6225
9th Coast Guard District
1240 East 9th Street
Cleveland, Ohio 44199
Duty Officer: (216) 522-3984
11th Coast Guard District
Heartwell Bldg.
19 Pine Avenue
Long Beach, Calif. 90802
Duty Officer: (213) 590-2311
12th Coast Guard District
630 Sansome Street
San Francisco, Calif. 94126
Duty Officer: (415) 556-5500
13th Coast Guard District
618 2nd Avenue
Seattle, Wash. 98104
Duty Officer: (206) 624-2902
14th Coast Guard District
677 Ala Moana Blvd.
Honolulu, Hawaii 96813
Duty Officer: (808) 546-7109
(COMMERCIAL ONLY)
AUTOVON—421-4845
17th Coast Guard District
P.O. Box 3-5000
Juneau, Alaska 99801
Duty Officer: (907) 586-7340
(COMMERCIAL ONLY)
AUTOVON—388-1121

ANNEX IX—1000 FUNDING

1001 General.

1001.1 The primary thrust of this Plan is to encourage the person responsible for a discharge to take appropriate remedial actions promptly. Usually this will mean that the cost of removal of the discharge shall be borne by the person responsible for the discharge. The OSC and other officials associated with the handling of a pollution emergency shall make a substantial effort to have the discharger voluntarily accept this responsibility.

1001.2 If the discharger does not voluntarily act promptly to remove the discharge of oil or hazardous substances, Federal discharge removal actions may be initiated pursuant to section 311(c)(1) of the Act. The discharger, if known, is liable for the reasonable costs of such Federal removal actions in accordance with section 311(f) of the Act.

1001.3 Actions undertaken by the Primary Agencies in response to pollution emergencies shall be carried out under existing programs and authorities insofar as practicable.

1001.4 It is not envisioned that any Federal agency will make resources available, expend funds or participate in operations in connection with pollution emergency operations unless such agency can so respond in conformance with its existing authority. Authority to expend resources will be in accordance with agencies' basic statutes and, if required, through cross-servicing agreements.

1001.5 This Plan encourages interagency agreements whenever specific reimbursement agreements between Federal agencies are deemed necessary to ensure that the Federal resources will be available for a timely response to a pollution emergency.

1002 Funding responsibility.

1002.1 The funding of removal actions necessitated by a discharge from a Federally operated or supervised facility is the responsibility of the operating or supervising agency.

1002.2 Funding of response actions not associated with the removal activity, such as scientific investigations, law enforcement or public relations, is the responsibility of the agency having statutory or executive responsibility for these specific actions.

1003 Agency funding.

1003.1 The Environmental Protection Agency can provide funds to insure timely initiation of discharge removal actions in those instances where the OSC is an EPA representative. Funding of continuing Phase III and IV actions, however, shall be determined on a case-by-case basis by the Oil and Special Materials Control Division at EPA. Inasmuch as EPA does not have funds provided for this purpose by statute or regulation, initiation of Phase III and IV activities is funded out of operating program funds.

1003.2 The U.S. Coast Guard pollution control efforts are funded under "Operating Expenses." These funds are utilized in accordance with agency directives and applicable regional plans.

1003.3 The Department of Defense has two specific sources of funds which may be applicable to a pollution incident under appropriate circumstances. (This does not consider military resources which might be made available under specific conditions.)

1003.3-1 Funds required for removal of a sunken vessel or similar obstruction to navigation are available to the Corps of Engineers through Civil Functions Appropriations, Operations and Maintenance, General.

1003.3-2 The U.S. Navy has funds available on a reimbursable basis to conduct salvage operations.

1004 Disaster relief funds.

1004.1 Certain pollution control emergency response activities may qualify for reimbursement as disaster relief functions. In making a declaration of a "major disaster or emergency" for a stricken area, the President may allocate funds from his Disaster Relief Fund, administered by the Administrator, Federal Disaster Assistance Administration. After the President has declared a "major disaster or emergency" and authorized allocation of funds, the Administrator may authorize certain reimbursements to Federal agencies for assistance provided under direction of his office. Applicable policies and procedures are stated in Title 24, Chapter XIII, Part 2201, "Reimbursement of Other Federal Agencies" under Pub. L. 91-606 (For use under Pub. L. 93-288 until revised).

1004.2 The Administrator, FDAA, may also make financial assistance available to State governments and through the States to local governments in accordance with policies and procedures stated in Title 24, Chapter XIII, Part 2205, "Federal Disaster Assistance".

1005 Pollution revolving fund.

1005.1 A pollution revolving fund, administered by the Commandant, USCG, has been established pursuant to subsection (k) of section 311 of the Act. Regulations governing the administration and use of the fund are contained in 33 CFR 153.

1005.2 Pursuant to section 311(c)(2)(H) of Public Law 92-500, the State or States affected by a discharge of oil or hazardous substance may act where necessary to remove such discharge and may, pursuant to regulations which the Commandant, USCG, may prescribe, be reimbursed from the fund for the reasonable costs incurred in such removal.

1005.2-1 Removal by a State is necessary when the OSC determines that the owner or operator of the vessel, onshore facility, or offshore facility from which the discharge occurs does not effect removal properly and that:

1005.2-1.1 State action is required to minimize or mitigate significant damage to the public health or welfare which Federal action cannot minimize or mitigate, or

1005.2-1.2 Removal or partial removal can be effected by the State at a cost which is not significantly greater than the cost which would be incurred by the Federal departments or agencies.

1005.2-2 Notwithstanding the above, State removal actions are not necessary if not in compliance with Annex X of this Plan.

1005.2-3 State removal operations are considered to be Response Phase III or Response Phase IV actions to the extent that the same operations undertaken by a Federal agency would be so considered.

1005.2-4 When supervised by the State agency designated pursuant to § 1510.22(a) of this Plan, removal operations of a local government are considered to be actions of the State for purposes of this section.

1006 Obligations of funds.

1006.1 Care must be exercised to ensure that misunderstandings do not develop about reimbursement of funds expended for removal activities. The OSC should not knowingly request services for which reimbursement is mandatory unless reimbursement funds are known to be available. Similarly, the agency supplying a reimbursable service should determine the source of reimbursement before committing resources necessitating reimbursement.

1006.2 OSC shall exert adequate control of removal operations so that he can certify that reimbursement from the fund is appropriate.

1006.3 Detailed instructions on utilization of the fund are contained in USCG Comptroller Manual.

1007 Planning.

1007.1 The availability of funds and requirements for the reimbursement of expenditures by certain agencies must be included in resource utilization planning. Regional and subregional contingency plans should show what resources are available under what conditions and cost arrangements.

1007.2 Local interagency agreements may be necessary to specify when reimbursement is required.

ANNEX X—SCHEDULE OF CHEMICALS AND OTHER ADDITIVES TO REMOVE OIL AND HAZARDOUS SUBSTANCES DISCHARGES

2001 General.

2001.1 This Schedule has been prepared by the U.S. Environmental Protection Agency pursuant to section 1(2), Executive Order 11735 and applies to the waters of the United States and adjoining shorelines, and the waters of the contiguous zone.

2001.2 This Schedule applies to the use of any chemicals or other additives as hereinafter defined that may be used to remove oil and remove or neutralize hazardous substances discharges. Any chemical agent or other substance not specifically defined in this schedule will be considered by EPA on a case by case basis for use in the removal of oil and hazardous substances discharges.

2001.3 This Schedule advocates development and utilization of sorbents, skimmers, booms and other mechanical control methods to remove or mitigate oil and remove, mitigate, or neutralize hazardous substances discharges from the environment with subsequent proper disposal.

2001.4 It is the intent of this Schedule that no harmful quantities of any substances be applied to the waters to remove or mitigate the effects of oil or hazardous substances discharges.

2001.5 In implementing this schedule and in maintaining its relationship with other Federal and State agencies, EPA shall recognize that some States may have more stringent laws, regulations or written policies regulating the use of chemicals in the removal of oil and hazardous substance discharges, in which case such laws, regulations or policies shall govern.

2001.6 It has been determined that because of the overriding need for prompt initiation of discharge removal actions no formal permit, as provided for by section 402 of the Act, shall be required before application of chemicals to mitigate the effects of a discharge. The provisions of § 1510.2(g) of this Plan shall apply.

2002 *Definitions.* Materials applied to oil or floating hazardous substances discharges are defined as follows:

2002.1 Chemical Agents are those elements, compounds, or mixtures that disperse, dissolve, emulsify, neutralize, precipitate, reduce, solubilize, oxidize, concentrate, congeal, entrap, fix, gell, make the pollutant mass more rigid or viscous, or otherwise facilitate the mitigation of deleterious effects or removal of the pollutant from the water.

2002.2 Dispersing Agents are those chemical agents which emulsify, disperse, or solubilize oil into the water column or act to further the surface spreading of oil slicks in order to facilitate dispersal of the oil into the water column.

2002.3 Surface Collecting Agents are those chemical agents which are a surface film forming chemical for controlling oil layer thickness.

2002.4 Biological Agents are microbiological cultures, enzymes, or nutrient additives that are deliberately introduced into an oil or hazardous substance spill for the specific purpose of encouraging biodegradation to mitigate the effects of a spill.

2002.5 Burning Agents are those materials which, through physical or chemical means, improve the combustibility of the materials to which they are applied.

2002.6 Sinking Agents are those materials which are applied to oil and hazardous substance spills to sink floating pollutants below the water surface.

2002.7 Mechanical removal methods include the use of pumps, skimmers, booms, earthmoving equipment, and other mechanical devices.

2002.8 Sorbents are essentially inert and insoluble materials which are used to remove oil and hazardous substances from water through a variety of sorption mechanisms. Examples include: straw, expanded perlite, polyurethane foams, reclaimed paper fibers, peat moss.

2003 Dispersing agent program for spills of oil and applicable hazardous substances.

2003.1 Authorization for use of dispersing agents.

2003.1-10 Major and medium discharges. Dispersing agents may be used in any place, at any time, and in quantities designated by the OSC when their use will:

2003.1-1.1 In the judgment of the OSC, prevent or substantially reduce hazard to human life or limb or substantially reduce explosion or fire hazard to property;

2003.1-1.2 In the judgment of the EPA RRT member on a case by case basis, in consultation with appropriate State or Federal agencies, prevent or reduce substantial hazard to a major segment of the population(s) of vulnerable species of waterfowl; or,

2003.1-1.3 In the judgment of the EPA RRT member on a case by case basis, in consultation, whenever possible, with appropriate State and Federal agencies, result in the least overall environmental damage, or interference with designated water uses.

E-16

2003.1-2 Minor discharge. The provisions of section 2003.1-1.1 shall apply.

2003.2 Special restrictions on dispersing agent use:

2003.2-1 Chemical agents shall not be considered for use as dispersing agents unless technical product data has been provided and accepted in accordance with 2003.3 except when in the judgment of the On-Scene Coordinator the hazards discussed in 2003.1-1.1 are so imminent that the time delay for obtaining a dispersant agent that is in compliance with 2003.3 would be excessive.

2003.2-2 Federal officials responsible for oil and hazardous substance spill response activities at all levels shall develop effective programs to insure that dispersants that are available for use in appropriate spill response actions are dispersants with adequate technical data on file with EPA. This effort will help preclude the avoidance of the EPA technical data program by manufacturers or suppliers who might wish to take advantage of the emergency conditions provisions of 2003.2-1.

2003.2-3 For all situations where dispersants are used, accurate records shall be kept on dispersant types, brands, application rates and methods, effectiveness, environmental impacts, plus any other pertinent observations.

2003.3 Technical product data for dispersing agents.

2003.3-1 Technical product data as outlined in 2003.3-4 on the physical, chemical and toxicity characteristics of a dispersing agent shall be submitted to the Division of Oil and Special Materials Control (WH-403), Environmental Protection Agency, Washington, D.C. 20460, at least 60 days prior to the use of the agent. Within 60 days of receipt of the data, EPA will inform in writing the submitter on the adequacy of the data provided. If additional information is requested or EPA desires to perform tests, the dispersing agent may not be considered for use until the additional needs have been satisfied and the submitter so notified.

2003.3-2 Information furnished in accordance with 2003.3-4 shall be maintained on file by the Environmental Protection Agency, Oil and Special Materials Control Division, Washington, D.C. 20460 to provide technical guidance to OSC's on the acceptable circumstances of use and dosage rates for dispersing agents. Any changes in the composition or formulation of the dispersing agent that will affect any of the data being requested in 2003.3-4 shall be immediately brought to the attention of EPA and testing of the agent will be repeated prior to the use of the revised dispersing agent.

2003.3-3 The acceptance and maintenance of product data by EPA does not constitute approval of the dispersing agent nor does it imply compliance with any EPA criteria or minimum standards for such agents. The OSC will determine which dispersing agent may be used for a spill event on a case by case basis using all available information in making such a decision. To avoid possible misinterpretation and misrepresentation of the EPA's role in this technical product data program, the manufacturer's representatives may use only the EPA letter advising compliance with 2003.3-4 in any advertisements or technical literature on the dispersing agent. The EPA letter must be used in its entirety. Failure to comply with these restrictions or any other improper reference to EPA in attempting to demonstrate EPA approval of the dispersing agent for use on spills of oil or hazardous substances shall constitute grounds for removing the technical product data from EPA files which would preclude use of the dispersing agent except as noted in 2003.2-3 for imminent hazards.

2003.3-4 Required technical product data.

2003.3-4.1 Name, brand, or trademark, if any, under which the chemical agent is sold.

2003.3-4.2 Name, address and telephone number of the manufacturer, importer or vendor.

2003.3-4.3 Name, address and telephone number of primary distributors or sales outlets.

2003.3-4.4 Special handling and worker precautions for storage and field application. Maximum and minimum storage temperatures to include optimum ranges as well as temperatures that will cause phase separation, chemical changes or otherwise damage effectiveness of the chemical agent.

2003.3-4.5 Shelf life.

2003.3-4.6 Recommended application procedure(s), concentration(s) and conditions for use depending upon water salinity, water temperature and types and ages of the pollutants.

2003.3-4.7 Dispersant toxicity. Use standard toxicity test methods described in EPA Report "Standard Dispersant Effectiveness and Toxicity Test" (EPA R2-73-201, May 1973) pages 22-31. This report may be obtained from the Division of Oil and Special Materials Control (AW-448), EPA, Washington, D.C. 20460.

2003.3-4.8 Dispersant Effectiveness. Use standard effectiveness test methods in EPA R2-73-201, May 1973, pages 11-21.

2003.3-4.9 Flash Point—select appropriate method from the following:

ASTM D 56-70
ASTM D 92-72
ASTM D 93-72
ASTM D 1310-67

2003.3-4.10 Pour point. Use ASTM D 97-66.

2003.3-4.11 Viscosity. Use ASTM D 445-72.

2003.3-4.12 Specific gravity. Use ASTM D 1298-67.

2003.3-4.13 pH. Use ASTM D 1293-65.

2003.3-4.14 Ionic activity. Use Weatherburn Test as described below:

Ionic Activity Tests (Weatherburn Test)

Reagents:

1. Dye solution: 0.03 grams methylene blue, 12 grams concentrated sulfuric acid, 50 grams anhydrous sodium sulphate dissolved in water to make a total of one liter solution.

2. Anionic surfactant solution—0.05 percent Aerosol OT (Sodium dioctyl sulfo succinate).

3. Chloroform.

Procedure:

1. Into a 25 ml. test tube, place 8 ml. of dye solution and 5 ml. chloroform. Add anionic surfactants solution drop by drop, shaking vigorously between drops and allowing phases to separate. Continue adding dropwise until the two layers are equal in color and intensity viewed in reflected light. Usually 10 to 12 drops of anionic solution are required.

2. Now add 2 ml. of 0.1 percent solution of the unknown and shake vigorously.

Results:

1. Chloroform phase (lower) is deeper in color and aqueous phase is mostly colorless—anionic is positive.

2. Water phase (upper) is deeper in color than the chloroform phase—cationic is positive.

3. Both phases are more or less the same color—probably a nonionic.

4. If the aqueous phase has become milky and hence slightly lighter in color, it may still be nonionic. Soaps do not react in this procedure. If both anionics and nonionics are present, the reaction of this test will be anionic positive.

2003.3-4.15 Miscibility. Use the test described below which is a modification of military specification MIL-C-22230 (ships):

One part of the dispersing agent is mixed with 100 parts of synthetic sea water. The solution is agitated for one hour and any visible separation of the dispersing agent should be noted after this period of agitation. The test is to be performed with water temperatures at both 20 C and 0 C. The synthetic sea water shall be formulated as follows:

Sodium chloride	150.0	grams.
Magnesium chloride, hexahydrate	66.0	grams.
Calcium chloride dihydrate	9.0	grams.
Sodium sulfate anhydrous	24.0	grams.
Distilled water to make a total of	6.0	liters.

2003.3-4.16 Dispersing agent components. Itemize by chemical name and percentage by weight of each component of the total formulation. The percentages will include maximum, minimum and average weights in order to reflect quality control variations in manufacture or formulations. At least the following major components shall be identified in complying with 2003.3-4.16.

(a) Surface active agents.

(b) Solvents.

(c) Additives.

If requested by the submitter, information from 2003.3-4.16 will be handled as trade secrets under provisions of Pub. L. 90-23, the Administrative Procedure Act.

2003.3-4.17 Heavy metals and chlorinated hydrocarbons. Using reliable analytical chemistry techniques, state the concentrations or upper limits of the following materials:

Arsenic, cadmium, chromium, copper, lead, mercury, nickel, zinc, plus any other metals that may be reasonably expected to be in the sample. Atomic absorption methods should be used and the detailed analytical methods and sample preparation shall be fully described;

Cyanide using standard colorimetric procedures;

Chlorinated hydrocarbons. Gas chromatography should be used and the detailed analytical methods and sample preparation shall be fully described.

2003.3-5 Analytical Laboratory Requirements for Technical Product Data:

2003.3-5.1 The required tests shall be performed by a qualified laboratory.

2003.3-5.2 The technical product data submission shall include the identity of the laboratory, the qualifications of the laboratory staff including professional biographical information for individuals responsible for any tests, and laboratory experience with similar tests. Laboratories performing bioassay tests for dispersant or surface collecting agent toxicity must demonstrate previous bioassay experience in order for their results to be accepted. EPA will not approve the selection of laboratories by intended submitters of technical product data prior to submission of the data. It is the responsibility of the submitter to select competent analytical laboratories based on the guidelines contained herein.

2003.3-5.3 EPA reserves the right to refuse to accept a submission of technical product data because of lack of qualifications of analytical laboratory, significant variance between submitted data and any laboratory confirmation performed by EPA, or other circumstances that will result in inadequate or inaccurate environmental information on the dispersing agent.

2004 Surface collecting agent program for spills of oil and applicable hazardous substances.

2004.1-1 Authorization for use of surface collecting agents: Major, medium and minor discharges.

The OSC may authorize use of surface collecting agents on a case-by-case basis when their use will:

2004.1-1.1 Result in the least overall environmental damage or interference with designated water uses, and

2004.1-1.2 Provide a key element in the most effective system for removing oil or hazardous substances discharges from the water environment.

E-17

2004.1-2 Mechanism for authorizing use—The OSC may authorize the use of a surface collecting agent verbally when on scene or by telephone prior to arriving on scene. In all cases, the OSC is obligated to comply with the provisions of 2004.2 prior to making such authorization. A review of the capabilities and expertise of the owner or operator or cleanup contractor prior to the occurrence of the spill incident would be most beneficial in situations where telephone authorization is desired or contemplated.

2004.2 Restrictions on surface collecting agent use.

2004.2-1 The OSC may authorize the use of surface collecting agents only after being informed of the environmental conditions at the point of intended use. These environmental conditions include air and water temperatures, wind conditions, wave and current conditions, presence and relative density of debris and other floating matter on the water, type and condition of the oil or hazardous substance spilled, special biological factors such as waterfowl sanctuaries, wildlife refuges, spawning or nursery grounds, shellfish beds, swamp areas, etc., and the availability of removal equipment that could be employed to remove the collected material from the water. Information on environmental conditions should be evaluated by the OSC from the standpoint that conditions such as strong winds, choppy waters, low temperatures, debris, and aquatic vegetation can adversely affect the performance of collecting agents or complicate further removal operations. The performance can also vary with types of oils or hazardous substances. The agents can be effective with thin films of light oils but have little value with thick layers of heavy, viscous oils. The agents should not be used unless adequate removal equipment is available to remove the collected oil.

2004.2-2 A chemical agent shall not be used as a surface collecting agent unless the provisions of 2004.3 are complied with and EPA has informed the manufacturer's representative that the product is acceptable for use as a surface collecting agent.

2004.3 Technical product data for surface collecting agents.

2004.3-1 Technical product data as specified in 2004.3-4 shall be provided to the Oil and Special Materials Control Division (WH-448), EPA, Washington, D.C. 20460, at least 60 days prior to the use of the agent. The use of existing surface collecting agents may be authorized by the OSC without complying with 2004.3 for 120 days from the effective date of this Annex. Within 60 days of receipt of the data, EPA will inform, in writing, the submitter of the adequacy of the data submitted. If additional data are requested or EPA desires to perform additional tests, the surface collecting agent may not be used until these additional needs have been satisfied and the submitter so notified.

2004.3-2 Information furnished in accordance with 2004.3-4 shall be maintained on file by the EPA, Oil and Special Materials Control Division, Washington, D.C. 20460, to provide technical guidance to OSC's on the acceptable circumstances of use, dosage rates and special problems in the use of surface collecting agent. Any changes in the composition or formulation of the surface collecting agent that will affect any of the data requested in 2004.3 shall be immediately brought to the attention of EPA and testing of the agent will be repeated prior to the use of the revised formulation of the surface collecting agent.

2004.3-3 EPA will review technical product data for surface collecting agents and will issue approvals for agents meeting certain criteria. At present, the only minimum criterion established is for solubility which is described in 2004.3-4.13. This criterion classifies the substance as a surface collecting agent but is not an indication of the effectiveness or toxicity of the material. Other product data such as toxicity, chemical components, and physical characteristics will be reviewed and, if the combined effects of this data and other factors will result in exces- [illegible] aquatic life, work safety, [illegible] of the environment in the [illegible] EPA, EPA may refuse to approve the use of the agent.

EPA may, from time to time, establish minimum criteria for the data being requested and may also require additional data to assist in arriving at a judgment on the environmental acceptability of collecting agent usage.

To avoid possible misinterpretation and misrepresentation of the EPA's role in the surface collecting agent technical product data program, the manufacturer's representatives may use only the EPA letter advising compliance with 2004.3-4 in any advertisements or technical literature on the collecting agent. The EPA letter must be used in its entirety. Failure to comply with these restrictions or any other improper reference to EPA in attempting to demonstrate EPA approval of the surface collecting agent beyond that stated in the letter for use on spills of oil or hazardous substances shall constitute grounds for removing the technical product data from EPA files which would preclude use of the surface collecting agent.

2004.3-4 Required technical product data.

2004.3-4.1 Name, brand, or trademark, if any, under which the surface collecting agent is sold.

2004.3-4.2 Name, address and telephone number of the manufacturer, importer or vendor.

2004.3-4.3 Name, address and telephone number of primary distributors or sales outlets.

2004.3-4.4 Special handling and worker precautions for storage and field application. Maximum and minimum storage temperatures to include optimum ranges as well as temperatures that will cause phase separation, chemical changes, or otherwise damage effectiveness of the surface collecting agent.

2004.3-4.5 Shelf life.

2004.3-4.6 Recommended application procedure(s), concentration(s) and conditions for use depending upon water salinity, water temperature and types and ages of the pollutants.

2004.3-4.7 Surface collecting agent toxicity. Use standard toxicity test methods described in EPA Report "Standard Dispersant Effectiveness and Toxicity Test" (EPA R2-73-201, May 1973) pages 22-34. This report may be obtained from the Division of Oil and Special Materials Control (WH-448), EPA, Washington, D.C. 20460.

2004.3-4.8 Flash point. Select appropriate method from the following:

ASTM D 56-70
ASTM D 92-72
ASTM D 93-72
ASTM D 1310-67

2004.3-4.9 Pour Point. Use ASTM D 97-66.

2004.3-4.10 Viscosity. Use ASTM D 445-72.

2004.3-4.11 Specific gravity. Use ASTM D 1298-67.

2004.3-4.12 pH. Use ASTM D 1293-65.

2004.3-4.13 Interim test to distinguish between surface collecting agents and other spill cleanup chemicals.

In order to distinguish between surface collecting agents and other chemical materials, this interim test procedure was developed. This test procedure is not an efficiency test. This test is to be used only to distinguish between surface collecting agents and dispersants.

Scope.—1. Procedure to be used to determine the solubility in water under standard conditions of oil spill control chemicals.

Method summary.—2. Five (5) milliliters of the chemical under test are intimately mixed with ninety-five (95) milliliters of distilled water, allowed to stand undisturbed for one hour, and then the volume of the upper phase is determined to the nearest 1 milliliter.

Apparatus.—3. (a) Mixing cylinder, 100 milliliter subdivisions and fitted with glass stoppers.

(b) Pipettes: Volumetric pipette, 5.0 milliliter.

(c) Timers.

Procedure.—4. Add 95 milliliters of distilled water at 72 F±5 F to a 100 milliliter mixing cylinder. To the surface of the water in the mixing cylinder, add 5.0 milliliters of the chemical under test. Insert the stopper and invert the cylinder 5 times in 10 seconds. Set upright for one (1) hour at 72 F±5 F and then measure the chemical layer at the surface of the water. The major portions of the chemical added (76±1 1) should be at the water surface as a separate and easily distinguished layer.

2004.3-4.14 Surface collecting agent components. Itemize by chemical name and percentage by weight of each component of the total formulation. The percentages will include maximum, minimum and average weights in order to reflect quality control variations in manufacture or formulations. As least the following major components shall be identified:

(a) Surface active agents.

(b) Solvents.

(c) Additives.

If requested by the submitter, information for 2004.3-4.14 will be handled as trade secrets under provisions of Pub. L. 90-23, the Administrative Procedures Act.

2004.3-4.15 Heavy metals and chlorinated hydrocarbons.

Using reliable analytical chemistry techniques, state the concentrations or upper limits of the following materials:

Arsenic, cadmium, chromium, copper, lead, mercury, nickel, zinc, plus any other metals that may be in the sample. Atomic absorption methods should be used and the detailed analytical methods and sample preparation shall be fully described;

Cyanide using standard colorimetric procedures;

Chlorinated hydrocarbons. Gas chromatography should be used and the detailed analytical methods and sample preparation shall be fully described.

2005.3-5 Analytical laboratory requirements for technical product data: Follow stipulations in 2003.3-5.

2005 *Biological additive program for spills of oil and applicable hazardous substances.*

2005.1 Authorization for use of biological agents.

2005.1-1 All Discharges. The OSC may authorize the use of biological additives on water or shorelines only after obtaining the approval of the EPA representative to the RRT. The EPA RRT representative is required to consult with the EPA representative to the NRT on the environmental priorities of the subject incident. The manufacturer or supplier of microbiological cultures or enzymes must obtain approval from State and local public health and pollution control officials and furnish evidence of such approval to the EPA RRT representative.

2005.2 Special restrictions on biological additive use.

2005.2-1 Microbiological cultures and enzyme mixtures shall not be considered for use as biological additives unless technical product data has been provided and accepted in accordance with 2005.3.

2005.2-2 The OSC must be supplied with the chemical composition and ratios of primary nutrients for nutrient additives prior to seeking approval for their use.

2005.3 Technical product data for biological additives.

2005.3-1 Technical product data as outlined in 2005.3-4 on the constituents of a biological additive shall be submitted to the Division of Oil and Special Materials Control (WH-448), Environmental Protection Agency, Washington, D.C. 20460, at least 60 days prior to the use of the additive. Within 60 days of receipt of the data, EPA will inform in writing the submitter on the adequacy of the data provided.

If additional information is requested or EPA desires to perform tests, the biological additive may not be used until the additional needs have been satisfied and the submitter so notified.

2005.3-2 Information furnished in accordance with 2005.3-4 shall be maintained on file by EPA to provide technical guidance to OSC's on the acceptable circumstances of use and application rates for biological additives. Any changes in the composition of the biological additive that will affect any of the data being requested in 2005.3-4 shall be immediately brought to the attention of EPA and testing of the additive will be repeated prior to the use of the revised biological additive.

2005.3-3 The acceptance and maintenance of product data by EPA does not constitute approval of the biological additive nor does it imply compliance with any EPA criteria or minimum standards for such additives. The OSC will determine which biological additive may be used for a spill event on a case-by-case basis using all available information in making such a decision. To avoid possible misinterpretation and misrepresentation of EPA's role in this technical product data program, the manufacturer's representatives may use only the EPA letter advising compliance with 2005.3-4 in any advertisements or technical literature on the biological additive. The EPA letter must be used in its entirety. Failure to comply with these restrictions or any other improper reference to EPA in attempting to demonstrate EPA approval of the biological additive for use on spills of oil or hazardous substances shall constitute grounds for removing the technical product data from EPA files which would preclude use of the biological additive.

2005.3-4 Required technical product data.

2005.3-4.1 Name, brand, or trademark, if any, under which the biological additive is sold.

2005.3-4.2 Name, address and telephone number of the manufacturer, importer or vendor.

2005.3-4.3 Name, address and telephone number of primary distributors or sales outlets.

2005.3-4.4 Special handling and worker precautions for storage and field application. Maximum and minimum storage temperatures.

2005.3-4.5 Shelf life.

2005.3-4.6 Recommended application procedure(s), concentration(s) and conditions for use depending upon water salinity, water temperature and types and ages of the pollutants.

2005.3-4.7 Statements on the expected effectiveness of the agent including degradation rates and the test conditions and data on effectiveness.

2005.3-4.8 For microbiological cultures furnish the following information:

Listing of all microorganisms to species.[1]

Percentage of each species in the composition of the additive.[1]

Optimum pH and temperature range for use of the additive.

Special nutrient requirements, if any.

Separate listing of the following and test methods for such determinations:

Salmonella, fecal coliform, shigella, staphylococcus coagulase positive, and beta hemolytic streptococci.

2005.3-4.9 For enzyme additives furnish the following information:

Enzyme name(s).

International Union of Biochemistry (I.U.B.) number(s).

Source of the enzyme.

Units.

Specific activity.

Optimum pH and temperature range for the use of the agent.

2005.3-5 Laboratory requirements for technical product data: Follow stipulations in 2003.3-5.

2006 *Burning agent program for spills of oil and applicable hazardous substances.*

2006.1 Authorization for use of burning agents.

2006.1-1 All discharges. The OSC may authorize the use of burning agents only when their use: 2006.1-1.1 will prevent or substantially reduce imminent threats to human life or limb or property;

2006.1-1.2 will result in the least environmental harm when compared to other removal or disposal methods.

2006.1-1.3 Prior to authorizing use under 2006.1-2, the OSC must obtain the approval of the EPA RRT representative and all applicable State and local public health and pollution control officials.

2006.2 Special restrictions on burning agent use.

2006.2-1 The OSC will evaluate the suitability of burning agents on a case-by-case basis. Burning agents should be inert materials that will not, in themselves, be a water pollutant. The addition of oils (such as gasoline or solvents) as an igniter shall be avoided unless it is necessary under 2006.1-1.

2006.2-2 A technical data program for burning agents will not be established at this time.

2007 *Sinking agent program for spills of oil and applicable hazardous substances.*

2007.1 Authorization for use of sinking agents.

2007.1-1 All discharges. Sinking agents shall not be applied to discharges of oil or hazardous substances on the navigable waters of the United States and the contiguous zone.

2008 *Mechanical methods and sorbents program for spills of oil and hazardous substances.*

2008.1 Authorization for use of mechanical methods and sorbents.

2008.1-1 All discharges.

2008.1-1.1 As stated in 2001.3, it is the policy of this schedule to advocate the use of mechanical methods and sorbents for removal of oil and hazardous substances spills. The OSC has the authority to use or prohibit specific mechanical methods and sorbents on a case-by-case basis. The OSC will select methods and materials that in his judgment, will be most effective in expeditiously removing the spilled material and mitigating the related damages, and will minimize secondary pollution from the removal or mitigation operation. Prior to authorizing the use of sorbents, the OSC shall take into consideration hydrographic and meteorological conditions as well as the characteristics of the sorbent and the availability of adequate containment and removal equipment.

2008.1-1.2 A technical data program for mechanical methods and sorbents will not be established at this time.

ANNEX XI—2100 NON-FEDERAL INTERESTS

2101 *General policy.*

2101.1 The policy of the Federal government is to initiate discharge removal operations when required and action is not being taken by the discharger or other private or public organization.

2110 *Planning and preparedness.*

2110.1 The planning and preparedness functions incorporated in regional contingency plans also apply to non-Federal resources. The State and local governments and private interests are to be encouraged to participate in Regional planning and preparedness functions.

2110.2 State and local government agencies are encouraged to include contingency planning for discharge removal in existing and future emergency and disaster planning activities. States are invited to provide observers to the planning activities of the appropriate RRT. (§1510.34(c) of the Plan)

2120 *Pollution emergency response operations.*

2120.1 State agencies may be reimbursed from the fund established by section 311(k) of the Act for reasonable costs incurred in the removal of oil and hazardous substances discharges from the waters and shorelines of the United States. The procedures to be followed are detailed in section 1905, Annex IX of this part.

2120.2 Regional Contingency Plans should provide for coordination with local government organizations such as as county and city or town governments. This is especially important for purposes of traffic control, land access and disposal of pollutants removed in response operations.

2130 *Volunteers.*

2130.1 In many pollution emergency situations in the coastal areas, volunteers desiring to assist in mitigating the effects of the pollution discharge response effort present themselves at the scene. Regional contingency plans should provide for this possibility and through the direct participa-

E-18

---

[1] If requested by the submitter, these items will be handled as trade secrets under provisions of Pub. L. 90-23, the Administrative Procedure Act.

tion of State observers in plan development, should establish procedures that will result in organized and worthwhile employment of these persons.

2130.2 Regional plans should provide for the organization and directing of volunteers by USCG, other Federal, local or State officials knowledgeable in contingency operations and capable of providing mature, responsive and practical leadership.

2130.3 Regional plans should also provide specific areas in which volunteers should be used such as: Beach surveillance, logistical support, bird and other wildlife treatment and scientific investigations. Normally they should not be used for physical removal of pollutants. Specifically, if a substance is toxic to humans, volunteers should not be permitted at on-scene operations.

2130.4 Information for and education of volunteer personnel on general contingency operations and procedures as well as specific details of the discharge is mandatory if response efforts are to be effective and conclusive. Regional plans should provide for this volunteer education and training program for rapid, on-site use.

2130.5 During contingency plan operations, information on the discharge and removal efforts should be provided to volunteers frequently to insure coordinated effort and a sense of meaningful participation.

ANNEX XV—2500 TECHNICAL INFORMATION

2501 Technical library.

2501.1 A technical library of pertinent pollution control technical documents will be maintained in the NRC and in each RRC. Such information should be useful as reference information to the experienced OSC and instructional to less experienced personnel.

2502 Specific references.

2502.1 As a minimum, the following reference documents will be maintained in the NRC and in each RRC technical library.

2502.1-1 Current National Oil and Hazardous Substances Pollution Contingency Plan.

2502.1-2 Current Regional and State Oil and Hazardous Substances Pollution Contingency Plan.

2502.1-3 Current Directory of the American Council of Independent Laboratories.

2502.1-4 Encyclopedia of Chemical Technology. 22 Vols., Kirkothmer, 2nd edition c1963-1971, John Wiley & Sons, New York, New York.

2502.1-5 Chemical Data Guide for Bulk Shipment by Water (U.S. Coast Guard CG-388).

2502.1-6 U.S. Corps of Engineers' Regulations ER 500-1-1 and ER 500-1-8 Emergency Employment of Army Resources (Natural Disaster Activities).

2502.1-7 Federal Disaster Assistance Program—Handbook for Applicants FDAA 3300.1, July 1973.

2502.1-8 Federal Disaster Assistance Program—Eligibility Handbook 3300.2, July 1973.

2502.1-9 Federal Disaster Assistance Program—Handbook for State and Federal Officials 3300.4, December 1973.

2502.1-10 Handbook of Toxicology (National Academy of Sciences/National Research Council).

2502.1-11 46 CFR-146. Transportation or Storage of Explosives or other Dangerous Articles or Substances, and Combustible Liquids on Board Vessels.

2502.1-12 33 CFR, 3, 6, 121, 122, 124-6. Security of Vessels and Waterfront Facilities (USCG CG 220).

2502.1-13 33 and 40 CFR parts implementing section 311 of the Federal Water Pollution Control Act, as amended.

2502.2 In addition to the library specified above, the RRC should have provision, either in publications or by computer terminal, for access to the EPA Technical Assistance Data System (TADS) and the USCG Chemical Hazard Response Information System (CHRIS).

2503 Definitions of terms.

2503.1 *API Gravity.* An empirical scale for measuring the density of liquid petroleum products, the unit being called the "degree API".

2503.2 *Ash.* Inorganic residue remaining after ignition of combustible substances determined by definite prescribed methods.

2503.3 *Asphalts.* Black, solid or semisolid bitumens which occur in nature or are obtained as residues during petroleum refining.

2503.4 *Bilge Oil.* Waste oil which accumulates, usually in small quantities, in the lower spaces in a ship, just inside the shell plating. Usually mixed with larger quantities of water.

2503.5 *Blowout.* A sudden violent escape of gas and oil from an oil well when high pressure gas is encountered and preventive measures have failed.

2503.6 *Boiling Point.* The temperature at which the vapor pressure of a liquid is equal to the pressure of the atmosphere.

2503.7 *Bunker "C" Oil.* A general term used to indicate a heavy viscous fuel oil.

2503.8 *Bunker Fuel.* A general term for heavy oils used as fuel on ships and in industry. It often refers to No. 5 and 6 fuel oils.

2503.9 *Bunkering.* The process of fueling a ship.

2503.10 *Coker Feed (or fuel).* A special fuel oil used in a coker furnace, one of the operating elements of a refinery.

2503.11 *Conversion tables.*

Knowing	Gallon U.S.	Multiply by factor below to obtain: Barrel U.S.	Gallon imperial	Cubic feet	Litre
Gallon (U.S.)	1.000	0.023810	0.83268	0.13368	3.7853
Barrel	*42.0	1.0000	34.9726	5.6146	158.984
Gallon (Imp.)	1.2009	0.02859	1.000	0.1605	4.546
Cubic Feet	7.4805	0.1781	6.2288	1.000	28.316
Litres	0.2641	0.00629	0.2199	0.03532	1.000

	Pound	Ton (short)	Ton (long)	Ton (metric)
Pounds	1.00	0.00050	0.000446	0.0004536
Ton (Short)	*2000.0	1.0000	0.89286	0.90718
Ton (Long)	*2240.0	1.120	1.000	1.0160
Ton (Metric)	2204.6	1.1023	0.98421	1.000

One Hectolitre equals 100 Litre.
One Ton (Metric) equals 1000 Kilograms.
Conversions marked (*) are exact by definition.

2503.12 *Approximate conversions.*

Material	*Barrels Per Ton (Long)*
crude oils	6.7-8.1
aviation gasolines	8.3-9.3
motor gasolines	8.2-9.1
kerosenes	7.7-8.3
gas oils	7.2-7.9
diesel oils	7.0-7.9
lubricating oils	6.9-7.6
fuel oils	6.3-7.0
asphaltic bitumens	5.9-6.6

(As a general rule-of-thumb use 6.5 barrels or 250 gallons per ton of oil.)

2503.13 *Crude oil.* Petroleum as it is extracted from the earth. There may be several thousands of different substances in crude oil, some of which evaporate quickly while others persist indefinitely. The physical characteristics of crude oils may vary widely. Crude oils are often identified in trade jargon by their regions of origin. This identification may not relate to the apparent physical characteristics of the oil. Commercial gasoline, kerosene, heating oils, diesel oils, lubricating oils, waxes, and asphalts are all obtained by refining crude oil.

2503.14 *Demulsibility.* The resistance of an oil to emulsification, or the ability of an oil to separate from any water with which it is mixed. The better the demulsibility rating, the more quickly the oil separates from water.

2503.15 *Density.* Density is the term meaning the mass of a unit volume. Its numerical expression varies with the units selected.

2503.16 *Emulsion.* A mechanical mixture of two liquids which do not naturally mix as oil and water. Water-in-oil emulsions have the water as the internal phase and oil as the external. Oil-in-water emulsions have water as the external phase and the internal phase is oil.

2503.17 *Fire Point.* The lowest temperature at which an oil vaporizes rapidly enough to burn for at least 5 seconds after ignition, under standard conditions.

2503.18 *Flash Point.* The lowest temperature at which an oil gives off sufficient vapor to form a mixture which will ignite, under standard conditions.

2503.19 *Fraction.* Refinery term for a product of fractional distillation having a restricted boiling range.

2503.20 *Fuel oil grade.* Numerical ratings ranging from 1 to 6. The lower the grade number, the thinner the oil is and the more easily it evaporates. A high number indicates a relatively thick, heavy oil. No. 1 and No. 2 fuel oils are usually used in domestic heaters, and the others are used by industry and ships. No. 5 and 6 oils are solids which must be liquified by heating. Kerosene, coal oil, and range oil are all No. 1 oil. No. 3 fuel oil is no longer used as a standard term.

2503.21 *Innage.* Space occupied in a product container.

2503.22 *In personam.* An action *in personam* is instituted against an individual, usually through the personal service of process, and may result in the imposition of a liability directly upon the person of a defendant.

2503.23 *In rem.* An action *in rem* is one in which the vessel or thing itself is treated as offender and made defendant without any proceeding against the owners or even mentioning their names. The decree in an action *in rem* is enforced directly against the *res* by a condemnation and sale thereof.

2503.24 *Load on top.* A procedure for ballasting and cleaning unloaded tankers without discharging oil. Half of the tanks are first filled with seawater while the others are cleaned by hosing. Then oil from the cleaned tanks, along with oil which has separated out in the full tanks, is pumped into a single slop tank. The clean water in the full tanks is then discharged while the freshly-cleaned tanks are filled with seawater. Ballast is thus constantly maintained.

2503.25 *Oil films.* A slick thinner than .0001 inch and may be classified as follows:

Standard Term	Gallons of Oil Per Square Mile	Appearance
"barely visible"....	25	barely visible under most favorable light conditions
"silvery"............	50	visible as a silvery sheen on surface water
"slightly colored"..	100	first trace of color may be observed
"brightly colored"..	200	bright bands of color are visible
"dull"...............	600	colors begin to turn dull brown
"dark"...............	1332	Much darker brown

NOTE: Each one-inch thickness of oil equals 5.61 gallons per square yard or 17,378,709 gallons per square mile.

2503.26 *Outage.* Space left in a product container to allow for expansion during temperature changes it may undergo during shipment and use. Measurement of space not occupied.

E-20

2503.27 *pH.* Term used to express the apparent acidity or alkalinity of aqueous solutions; values below 7 indicate acid solutions and values above 7 indicate alkaline solutions.

2503.28 *Pour Point.* The lowest temperature at which an oil will flow or can be poured under specified conditions of test.

2503.29 *Residual oil.* A general term used to indicate a heavy viscous fuel oil.

2503.30 *Scuppers.* Openings around the deck of a vessel which allow water falling onto the deck to flow overboard. Should be plugged during fuel transfer.

2503.31 *Sludge oil.* Muddy impurities and acid which have settled from a mineral oil.

2503.32 *Specific gravity.* The ratio of the weight of a given volume of the material at a stated temperature to the weight of an equal volume of distilled water at a stated temperature.

2503.33 *Spontaneous ignition temperature (S.I.T.).* The temperature at which an oil ignites of its own accord in the presence of air oxygen under standard conditions.

2503.34 *Stoke.* The unit of kinematic viscosity.

2503.35 *Tonnage.* There are various tonnages applied to merchant ships. The one commonly implied is gross tonnage although in these days tankers and other bulk-carriers are often referred to in terms of deadweight.

2503.35-1 *Gross tonnage.* 100 cubic feet of permanently enclosed space is equal to one gross ton—nothing whatever to do with weight. This is usually the registered tonnage although it may vary somewhat according to the classifying authority or nationality.

2503.35-2 *Net tonnage.* The earning capacity of a ship. The gross tonnage after deduction of certain spaces, such as engine and boiler rooms, crew accommodation, stores, equipment, etc. Port and harbor dues are based on this tonnage.

2503.35-3 *Displacement tonnage.* The actual weight in tons, varying according to whether a vessel is in light or loaded condition. Warships are always spoken of by this form of measurement.

2503.35-4 *Deadweight tonnage.* The actual weight in tons of cargo, stores, etc., required to bring a vessel down to her load line, from the light condition. Cargo deadweight is, as its name implies, the actual weight in tons of the cargo when loaded, as distinct from stores, ballast, etc.

2503.36 *Ullage.* The amount by which a tank or vessel lacks being filled. (See also Outage)

2503.37 *Viscosity.* The property of liquids which causes them to resist instantaneous change of shape, or instantaneous rearrangement of their parts, due to internal friction. The resistance which the particles of a liquid offer to a force tending to move them in relation to each other. Viscosity of oils is usually expressed as the number of seconds at a definite temperature required for a standard quantity of oil to flow through a standard apparatus.

2503.38 *Viscous.* Thick, resistant to flow, having a high viscosity.

2503.39 *Volatile.* Evaporates easily.

FINDING AIDS

A list of current CFR volumes, a list of superseded CFR volumes, and a list of CFR titles, subtitles, chapters, subchapters and parts are included in the subject index volume to the Code of Federal Regulations which is published separately and revised annually.

Table of CFR Titles and Chapters
Alphabetical List of CFR Subtitles and Chapters
Redesignation Table
List of CFR Sections Affected

APPENDIX F

OIL AND GAS LEASE CLAUSE

FOR PROTECTION OF THE ENVIRONMENT

F

Section 2, Paragraph (q) of Federal Oil and Gas Lease, 1/ *"Protection of Surface, Natural Resurces, and Improvements"*

(q) *Protection of surface, natural resources, and improvements.* The lessee agrees to take such reasonable steps as may be needed to prevent operations on the leased lands from unnecessarily: (1) causing or contributing to soil erosion or damaging crops, including forage, and timber growth thereon on Federal or non-Federal lands in the vicinity; (2) polluting air and water; (3) damaging improvements owned by the United States or other parties; or (4) destroying, damaging or removing fossils, historic or prehistoric ruins, or artifacts; and upon any partial or total relinquishment or the cancellation or expiration of this lease, or at any other time thereto when required and to the extent deemed necessary by the lessor to fill any pits, ditches and other excavations, remove or cover all debris, and so far as reasonably possible, restore the surface of the leased land and access roads to their former condition, including the removal of structures as and if required. The lessor may prescribe the steps to be taken and restoration to be made with respect to the leased lands and improvements thereon whether or not owned by the United States.

1/ *BLM Form 3120-7*

APPENDIX G

STIPULATIONS OF OIL AND GAS LEASES FOR FOREST SERVICE LANDS

G

Form 3109–3
(June 1971)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

STIPULATION FOR LANDS UNDER JURISDICTION OF DEPARTMENT OF AGRICULTURE *

The lands embraced in this lease or permit being under the jurisdiction of the Secretary of Agriculture, the lessee or permittee hereby agrees:

(1) To conduct all operations authorized by this lease or permit with due regard for good land management, not to cut or destroy timber without first obtaining permission from the authorized representative of the Secretary of Agriculture, and to pay for all such timber cut or destroyed at the rates prescribed by such representative; to avoid unnecessary damage to improvements, timber, crops, or other cover; unless otherwise authorized by the Secretary of Agriculture, not to drill any well, carry on operations, make excavations, construct tunnels, drill, or otherwise disturb the surface of the lands within 200 feet of any building standing on the lands and whenever required, in writing, by the authorized representative of the Secretary of Agriculture to fence or fill all sump holes, ditches, and other excavations, remove or cover all debris, and so far as reasonably possible, restore the surface of the lands to their former condition, including the removal of structures as and if required, and when required by such representative to bury all pipelines below plow depth.

(2) To do all in his power to prevent and suppress forest, brush, or grass fires on the lands and in their vicinity, and to require his employees, contractors, subcontractors, and employees of contractors or subcontractors to do likewise. Unless prevented by circumstances over which he has no control, the lessee or permittee shall place his employees, contractors, subcontractors, and employees of contractors and subcontractors employed on the lands at the disposal of any authorized officer of the Department of Agriculture for the purpose of fighting forest, brush, or grass fires on or originating on the lands or on adjacent areas or caused by the negligence of the lessee or permittee or his employees, contractors, subcontractors and employees of contractors and subcontractors, with the understanding that payment for such services shall be made at rates to be determined by the authorized representative of the Secretary of Agriculture, which rates shall not be less than the current rates of pay prevailing in the vicinity for services of a similar character: *Provided*, that if the lessee or permittee, his employees, contractors, subcontractors, or employees of contractors or subcontractors, caused or could have prevented the origin or spread of said fire or fires, no payment shall be made for services so rendered.

During periods of serious fire danger to forest, brush, or grass, as may be specified by the authorized representative of the Secretary of Agriculture, the lessee or permittee shall prohibit smoking and the building of camp and lunch fires by his employees, contractors, subcontractors, and employees of contractors or subcontractors within the area involved except at established camps, and shall enforce this prohibition by all means within his power: *Provided*, that the authorized representative of the Secretary of Agriculture may designate safe places where, after all inflammable material has been cleared away, campfires may be built for the purpose of heating lunches and where, at the option of the lessee or permittee, smoking may be permitted.

The lessee or permittee shall not burn rubbish, trash, or other inflammable materials *except* with the consent of the authorized representative of the Secretary of Agriculture and shall not use explosives in such a manner as to scatter inflammable materials on the surface of the lands during the forest, brush, or grass fire season, *except* as authorized to do so or on areas approved by such representative.

The lessee or permittee shall build or construct such fire lines or do such clearing on the lands as the authorized representative of the Secretary of Agriculture decides is essential for forest, brush, and grass fire prevention which is or may be necessitated by the exercise of the privileges authorized by this lease or permit, and shall maintain such fire tools at his headquarters or at the appropriate location on the lands as are deemed necessary by such representative.

---

* This form of stipulation may be used in connection with leases and permits issued under the Acts of February 25, 1920, as amended (30 U.S.C. 181 *et seq.*); August 7, 1947 (30 U.S.C. 351 *et seq.*); February 7, 1927, as amended (30 U.S.C. 281 *et seq.*); April 17, 1926, as amended (30 U.S.C. 271 *et seq.*); June 28, 1944 (58 Stat. 483–485); September 1, 1949 (30 U.S.C. 192c); June 30, 1950 (16 U.S.C. 508b); or under the authority of any of the Acts cited in Section 402 of the President's Reorganization Plan No. 3 of 1946 (5 U.S.C. 133y–16, Note).

(3) In the location, design, construction, and maintenance of all authorized works, buildings, plants, waterways, roads, telegraph or telephone lines, pipelines, reservoirs, tanks, pumping stations, or other structures or clearance, the lessee or permittee shall do all things reasonably necessary to prevent or reduce to the fullest extent scarring and erosion of the lands, pollution of the water resources and any damage to the watershed. Where construction, operation, or maintenance of any of the facilities on or connected with this lease or permit causes damage to the watershed or pollution of the water resources, the lessee or permittee agrees to repair such damage and to take such corrective measures to prevent further pollution or damage to the watershed as are deemed necessary by the authorized representative of the Secretary of Agriculture.

(4) If in the opinion of the authorized representative of the Secretary of Agriculture, the lands are valuable for watershed protection, the lessee or permittee shall provide for control of surface runoff and return the affected area to as productive condition as practicable.

(5) To pay the lessor or permitter or his tenant or the surface owner or his tenant, as the case may be, for any and all damage to or destruction of property caused by the lessee's or permittee's operations hereunder; to save and hold the lessor or permitter or the surface owner or their tenants harmless from all damage or claims for damage to persons or property resulting from the lessee's or permittee's operations under this lease or permit.

(6) To recognize existing uses and commitments, in the form of Department of Agriculture grazing, timber cutting, and special use permits, water developments, ditch, road, trail, pipeline, telephone line, and fence rights-of-way and other similar improvements, and to conduct his operations so as to interfere as little as possible with the rights and privileges granted by these permits or with other existing uses.

(7) To install and maintain cattle guards to prevent the passage of livestock in any openings made in fences by the lessee or permittee or his contractors to provide access to the lands covered by this lease or permit for automotive and other equipment.

(8) If lessee or permittee shall construct any camp on the lands, such camp shall be located at a place approved by the authorized representative of the Secretary of Agriculture, and such representative shall have authority to require that such camp be kept in a neat and sanitary condition.

(9) To comply with all federally-approved rules and regulations of the Secretary of Health, Education, and Welfare governing the emission of pollutants into the air from activities which are embraced in this lease or permit.

(10) To comply with all the rules and regulations of the Secretary of Agriculture governing the national forests or other lands under his jurisdiction which are embraced in this lease or permit.

(11) Unless otherwise authorized, prior to the beginning of operations to appoint and maintain at all times during the term of this lease or permit a local agent upon whom may be served written orders or notices respecting matters contained in this stipulation, and to inform the authorized representative of the Secretary of Agriculture, in writing, of the name and address of such agent. If a substitute agent is appointed, the lessee or permittee shall immediately so inform the said representative.

(12) To address all matters relating to this stipulation to

at

,

who is the authorized representative of the Secretary of Agriculture, or to such other representative as may from time to time, be designated, provided that such designation shall be in writing and be delivered to the lessee or permittee or his agent.

(Signature of Lessee)

☆U.S. Government Printing Office: 1971-780-512/81 Region 8

APPENDIX H

FORM FOR SPECIFYING ADDITIONAL STIPULATIONS AFTER LEASE ISSUANCE

H

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SURFACE DISTURBANCE STIPULATIONS

Area Oil and Gas Supervisor or
District Engineer *(Address, include zip code)*

Management Agency *(name)*

Address *(include zip code)*

1. Notwithstanding any provision of this lease to the contrary, any drilling, construction, or other operation on the leased lands that will disturb the surface thereof or otherwise affect the environment, hereinafter called "surface disturbing operation," conducted by lessee shall be subject, as set forth in this stipulation, to prior approval of such operation by the Area Oil and Gas Supervisor in consultation with appropriate surface management agency and to such rea[illegible]ble conditions, not inconsistent with the purposes [illegible] which this lease is issued, as the Supervisor may require to protect the surface of the leased lands and the environment.

2. Prior to entry upon the land or the disturbance of the surface thereof for drilling or other purposes, lessee shall submit for approval two (2) copies of a map and explanation of the nature of the anticipated activity and surface disturbance to the District Engineer or Area Oil and Gas Supervisor, as appropriate, and will also furnish the appropriate surface management agency named above, with a copy of such map and explanation.

An environmental analysis will be made by the Geological Survey in consultation with the appropriate surface management agency for the purpose of assuring proper protection of the surface, the natural resources, the environment, existing improvements, and for assuring timely reclamation of disturbed lands.

3. Upon completion of said environmental analysis, the District Engineer or Area Oil and Gas Supervisor, as appropriate, shall notify lessee of the conditions, if any, to which the proposed surface disturbing operations will be subject.

Said conditions may relate to any of the following:

- (a) Location of drilling or other exploratory or developmental operations or the manner in which they are to be conducted;
- (b) Types of vehicles that may be used and areas in which they may be used; and
- (c) Manner or location in which improvements such as roads, buildings, pipelines, or other improvements are to be constructed.

Form 3109-5 (August 1973)

GPO 849-25

APPENDIX I

STATE OF OREGON DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRY RULES AND REGULATIONS IN AN OIL AND GAS OPERATION

[redacted]

OREGON ADMINISTRATIVE RULES

CHAPTER 632

DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

Table of Contents

10-002 General Rules
10-004 Supremacy of Special Rules
10-006 Secretary to the Board
10-008 Definitions
10-010 Application and Permit to Drill
10-012 Changes of Location or Ownership
10-014 Drilling Practices
10-016 Identification of Wells
10-018 Organization Reports
10-020 Surface Equipment
10-122 Blow-Out Prevention
10-124 Drilling Fluid
10-126 Cleaning Wells
10-128 Boiler or Light Plant
10-130 Rubbish or Debris
10-132 Tubing
10-134 Chokes
10-136 Separators
10-138 Fire Walls
10-140 Slush Pits to be Filled In
10-142 Deviation
10-144 Report of Result of Shooting, Perforating or Treating of Well
10-146 Vacuum Pumps Prohibited
10-148 Production Practice
10-150 Pulling Outside Strings of Casing
10-151 Notification of Fire, Breaks, Leaks, or Blow-Outs
10-152 Producing From Different Strata Through the Same Casing String
10-154 Determining and Naming Pools.
10-156 Spacing Units
10-158 Location and Spacing of Wells
10-160 Pooling of Small Tracts
10-162 Illegal Production
10-164 Commingling of Production Prohibited
10-166 Reports by Purchasers and Producers
10-168 Use of Earthen Reservoirs
10-172 Operators to Assist in Reservoir Surveys
10-174 Measurement of Potential Open-Flow of Gas Wells
10-176 Supervision of Open-Flow and Pressure Tests
10-178 Duration of Tests
10-180 Notice of Tests
10-182 Gas to be Metered
10-184 Direct Well Pressure
10-186 Gas-Oil Ratio
10-188 Gas-Oil Ratio Surveys and Reports
10-190 Gas Utilization
10-192 Disposal of Brine or ✓ Salt Water
10-194 Water Injection and Water Flooding of Oil and Gas Properties
10-196 Gas Injection of Oil and Gas Properties
10-198 Abandonment, Unlawful Abandonment, Suspension, Well Plugging
10-200 Confidential Information

OREGON ADMINISTRATIVE RULES

GENERAL

Authority for Publication:
ORS 183.360 (1)

Contents:

Text of administrative rules or reference thereto for all agencies coming within the purview of ORS 183.310-183.510.

Replacement Pages:

Additions, amendments or repeals will be published in loose-leaf form and distributed as new or replacement pages with directions for inclusion in the compilation.

Record of Past Rules:

Replaced rules should be retained in a separate file for future reference to the prior wording of the amended or repealed rules.

HOW TO CITE

Cite all material in this compilation by the chapter and section number. Example: Oregon Administrative Rules, Chapter 274, Section 10-110. (Short form: OAR 274-10-110)

INDEX AND TABLE OF CONTENTS

An index and table of contents will be published with each chapter. Consideration will be given to the publication of a master index and table of contents upon completion of the compilation.

[ED. NOTE: Unless otherwise specified, sections 10-002 through 10-200 of this chapter of the Oregon Administrative Rules Compilation were adopted by the Department of Geology and Mineral Industries January 14, 1954 and filed with the Secretary of State January 27, 1954 as Administrative Order GMI 1.]

Statutory Authority: ORS 520.095

(ORS citations indicate the statutory reference concerning the matter regulated.)

10-002 GENERAL RULES. General rules shall be state-wide in application unless otherwise specifically stated and applicable to all lands within the jurisdiction of the State of Oregon.

10-004 SUPREMACY OF SPECIAL RULES. Special rules will be issued when required and shall prevail as against general rules if in conflict therewith.

10-006 SECRETARY TO THE BOARD. The director of the State Department of Geology and Mineral Industries shall act as secretary to the Board.

10-008 DEFINITIONS. As used in sections 10-010 to 10-200, unless otherwise required by context:

(1) "Allowable" shall mean the quantity of natural gas or oil allowed by order of the Board to be produced within a stated period.

(2) "Atmospheric Pressure" shall mean the pressure of air at sea level, equivalent to about 14.7 pounds to the square inch.

(3) "Barometric Pressure" shall mean the pressure or weight of air determined by the use of a barometer at a given point.

(4) "Barrel" shall mean 42 U. S. gallons equaling approximately 231 cubic inches to the gallon.

(5) "Blow-Out" shall mean a sudden or violent escape of oil or natural gas, as from a drilling well, when high formational pressure is encountered.

(6) "Blow-Out Preventer" shall mean a heavy casing-head control filled with special gates or rams which may be closed around the drill pipe, or which completely closes the top of the casing.

(7) "Bottom Hole Pressure" shall mean the pressure in pounds per square inch at or near the bottom of an oil or gas well determined at the face of the producing horizon by means of a pressure recording instrument, adopted and recognized by the oil and gas industry, and corrected to the predetermined plane.

(8) "Casing Pressure" shall mean the pressure built up between the casing and tubing when the casing and tubing are packed off at the top of the well.

(9) "Casing-Head Gas" shall mean any gas or vapor, or both gas and vapor, indigenous to an oil stratum and produced from such stratum with oil.

(10) "Combination Well" shall mean well productive of both oil and gas in commercial quantities from the same common source of supply and which has sufficient natural pressure to cause gas to enter a pipe line carrying more than atmospheric pressure.

(11) "Common Source of Supply" is - Synonymous with pool.

(12) "Condensate" shall mean hydrocarbons existing in the gaseous state in the reservoir, by condensing to a liquid at pressures or temperatures below those of the reservoir. For the purpose of brevity, the use herein of the word "oil" shall include condensate as defined herein, unless otherwise provided. For instance, oil well shall mean not only an oil well but also a condensate well.

(13) "Connate Water" shall mean the water which was present with the deposition of solid sediments in an oil or gas reservoir and which has not, during the oil accumulation, been displaced.

(14) "Correlative Rights" as used in these regulations shall mean that each owner or producer in a pool is privileged to produce therefrom only in such manner or amount as not to injure the reservoir to the detriment of others or to take an undue proportion of the oil or gas obtainable therefrom, or to cause net drainage between developed units.

(15) "Cubic Foot of Gas" shall mean

the volume of gas expressed in cubic feet computed at standard pressure base of 14.65 pounds per square inch absolute and a standard temperature base of 60 degree F.

(16) "Day" shall mean a period of twenty-four consecutive hours from 7 a.m. one day to 7 a.m. the following day.

(17) "Development" shall mean any work which actively looks toward bringing in production, such as erecting rigs, building tanks, drilling wells, etc.

(18) "Developed Area or Developed Unit" shall mean a proration unit having a well completed thereon which is capable of producing oil or gas in paying quantities; however, in the event it be shown, and the Board finds, that a part of any unit is nonproductive, then the developed area of the unit shall include only that part so found to be productive.

(19) "Differential Pressure" shall mean in the case of wellhead measurement the difference between the tubing pressure and the casing pressure; in the case of an orifice meter, the pressure difference between the up-stream and the downstream sides of the orifice, a pressure difference measured with a differential gauge or with a manometer (U tube).

(20) "Director" shall mean the director of the State Department of Geology and Mineral Industries.

(21) "Edge Water" shall mean water that holds the oil or gas, or both oil and gas, in a higher structural position usually encroaching on a pool as the oil or gas is recovered.

(22) "Field" shall mean the general area underlaid by one or more pools.

(23) "Gas" shall mean all natural gas, including casinghead gas and other hydrocarbons not defined as oil in subsection (5) of this section.

(24) "Gas Allowable" shall mean the amount of natural gas authorized to be produced by order of the Board.

(25) "Gas-Oil Ratio" shall mean the relation of the gas in cubic feet to the production of oil in barrels as accepted by pipe lines.

(26) "Gas Repressuring" shall mean the introduction of gaseous substances into a pool by artificial means in order to replenish, replace, or increase the reservoir energy.

(27) "Gas, Sour" shall mean gas which contains hydrogen-sulphide, sulphur, or other deleterious substances, in sufficient quantities to render it unfit for domestic light and fuel.

(28) "Gas Well" shall mean (a) a well which produces natural gas only; (b) that part of a well where the gas producing stratum has been successfully cased off from the oil, the gas and oil being produced through separate casing or tubing; (c) any well capable of producing gas in commercial quantities; or (d) a well producing from a reservoir containing no liquid hydrocarbons.

(29) "Illegal Gas" shall mean gas which has been produced within the State from any well or wells in excess of the amount allowed by any rule, regulation, or order of the Board, as distinguished from gas produced within the State not in excess of the amount of allowed production by any such rule, regulation, or order which is legal gas.

(30) "Illegal Oil" shall mean oil which has been produced within the State from any well or wells in excess of the amount allowed by any rule, regulation, or order of the Board, as distinguished from oil produced within the State not in excess of the amount so allowed by any such rule, regulation, or order which is legal oil.

(31) "Illegal Product" shall mean any product of oil or gas, any part of which was processed or derived, in whole or in part, from illegal oil or illegal gas or from any product thereof, as distinguished from legal product, which is a product processed or derived to no extent from illegal gas or illegal oil.

(32) "Indices of Productive Value" shall mean the factors to be considered in ascertaining the productivity of all property in a pool for the purpose of fixing the allowable production. These indices can mean, at the discretion of the Board, potential acreage, gas-oil ratios, static reservoir pressures, flowing pressures, fluid level drawdowns, the well or wells, or any other pertinent factors.

(33) "Mud-laden Fluid" shall mean

any approved mixture of water and clay or other material as the term is commonly used in the industry which will effectively seal the formation to which it is applied.

(34) "Net Drainage" shall mean the drainage or migration of oil or gas within the reservoir which is not equalized by counter-drainage.

(35) "Nomination" shall mean the statement made by a purchaser as to the amount of oil or gas he is willing to purchase for a given period.

(36) "Oil" shall mean crude petroleum oil and any other hydrocarbons, regardless of gravity, which are produced at the well head in liquid form and from gas by ordinary production methods.

(37) "Oil Allowable" shall mean the amount of oil authorized to be produced by order of the Board.

(38) "Oil Well" for the purpose of the rules, shall mean any well not a gas well capable of producing oil or condensate in paying quantities.

(39) "Operator" shall mean any person who, duly authorized, is in charge of the development of a lease or the operation of a producing well.

(40) "Overage, Overproduction" shall mean the oil or gas produced in excess of the allowable fixed by the Board.

(41) "Owner" shall mean the person who has the right to drill into and produce from a field or pool, or to appropriate the production therefrom, or both, either for himself or for himself and others."

Hist: Filed 6-20-55 as GMI 2.

(42) "Period Allowable" shall mean the period as designated in which an allowable may be produced.

(43) "Person" shall mean any natural person, partnership, corporation, association, receiver, trustee, guardian, fiduciary, executor, administrator, representative of any kind, or the State of Oregon and its political subdivisions.

(44) "Pipe Line Oil" shall mean oil free from water and basic sediment to the degree that it is acceptable for pipe line transportation and refinery use.

(45) "Pool" shall mean an underground reservoir containing or appearing to contain a common accumulation of oil and natural gas. A zone of a structure which is completely separated from any other zone in the same structure is a pool.

(46) "Potential" shall mean the computed daily ability of a well to produce oil as determined by a test made in conformity with rules prescribed by the Board.

(47) "Pressure Maintenance" shall mean (a) the reintroduction (in the early stages of field development) of gas or fluid produced from an oil or gas well to maintain the pressure of the reservoir; (b) the introduction of gas or fluid for the same purpose but obtained from an outside source.

(48) "Producer" or "owner" shall mean a person who has the right to drill into and to produce from any pool and to appropriate the oil or gas he produces therefrom either for others, for himself or for himself and others.

(49) "Product" shall mean any commodity made from oil or gas, and shall include refined crude oil, crude tops, topped crude, processed crude petroleum, residue from crude petroleum, cracking stock, uncracked fuel oil, fuel oil, treated crude oil, residuum, gas oil, casing-head gasoline, natural gas, gasoline, kerosene, benzene, wash oil, waste oil, blended gasoline, lubricating oil, blends or mixtures of oil with one or more liquid products or by-products derived from oil or gas, and blends or mixtures of two or more liquid products or by-products from oil or gas.

(50) "Proved Oil or Gas Land" shall mean the area which has been shown by development or geological information to be such that additional wells drilled thereon are reasonably certain to be commercially productive of oil or gas, or both.

(51) "Purchaser" shall mean any person who directly or indirectly purchases, transports, takes or otherwise removes production to his account from a well, wells, or pool.

(52) "Recycle" - See Pressure Maintenance.

(53) "Repressure" - See Pressure Maintenance.

(54) "Run" shall mean oil or gas piped from one place to another.

(55) "Separator" shall mean an apparatus for separating oil, gas, water, etc., with efficiency as it is produced.

(56) "Share, Fair" shall mean that part of the authorized production for the pool which is substantially in the proportion that the quantity of recoverable oil and gas in the developed area of a tract in the pool bears to the recoverable oil and gas in the total developed area of the pool, insofar as these amounts can be practically ascertained.

(57) "Shortage of Underage" shall mean the amount of production less than the allowable.

(58) "Spacing Unit" shall mean the maximum area in a pool which may be efficiently and economically drained by one well.

(59) "Storage" shall mean produced oil, gas, or both confined in tanks, reservoirs, or containers.

(60) "Storage, Underground" shall mean underground cavities either natural or artificial or both which are suitable for storage of natural gas, produced petroleum, and petroleum products. The term may also mean the produced petroleum and petroleum products confined in underground cavities.

(61) "Survey" shall mean all tests made for the purpose of obtaining information concerning the productive possibility of any geological formation and shall include electrical and directional surveys.

(62) "Waste" in addition to its ordinary meaning, shall mean "physical waste" as that term is generally understood in the petroleum industry. It includes:

(a) Underground waste and the inefficient, excessive or improper use or dissipation of reservoir energy, including gas energy and water drive, of any pool; and the locating, spacing, drilling, equipping, operating or producing of any oil well or gas well in a manner which results or tends to result in reducing the quantity of oil or gas ultimately recoverable from any pool;

(b) Surface waste and the inefficient storing of oil and the locating, spacing, drilling, equipping, operating or producing of oil wells or gas wells in a manner causing or tending to cause unnecessary or excessive surface loss or destruction of oil or gas. [1953 c 667, section 2.]

(63) "Well" shall mean a well drilled in search of oil or gas, but shall not include core test wells, stratigraphic test wells or wells drilled for information purposes only as distinguished from wells drilled for the purpose of producing oil or gas if found. [1953 c. 667 section 1]

(64) "Well Log" shall mean the written record progressively describing the strata, water, oil or gas encountered in drilling a well with such additional information as to give volumes, pressure, rate of fill-up, water depths, caving strata, casing record, etc., as is usually recorded in normal procedure of drilling, also to include electrical survey or logging.

(65) "Wildcat Well" shall mean a drilling or producing well in an unproved area.

(66) Additional definitions may be found in ORS 520.005 and 520.015.

10-010 APPLICATION AND PERMIT TO DRILL. "Before any person shall spud in and begin the actual drilling of any well in search of oil or gas, such person shall file with the Board his application, in such form as the Board shall require for a permit to drill said well. The application shall be accompanied by the sum of $25.00, which sum is fixed as a fee for granting of a permit. When satisfied that the application and the bond are in conformance with law, the Board, shall issue a permit to the applicant, in such form as it may have established by its rules and regulations; and the number appearing upon such permit shall at all times be conspicuously displayed on the derrick used in drilling such well.

"As a further condition precedent to the granting of a permit for drilling any oil or gas well, the operator shall furnish a bond in the sum of $4,000, conditioned as provided by law and on a form supplied by the Board. The surety on the bond shall be a corporate surety authorized to do business in the State of Oregon." (See ORS 520.025).

Hist: Filed 6-20-55 as GMI 2.

10-012 CHANGES OF LOCATION OR OWNERSHIP. (1) If, prior to the drilling of a well, the person to whom the permit was issued desires to change the location, he shall submit a letter so stating and another application properly filled out showing the new location. No additional fee is necessary, but drilling shall not be started until the transfer has been approved and the new permit posted at the new location.

(2) If, while a well is drilling or after it has been completed, the person to whom the permit was issued disposes of his interest in the well, he shall submit a written statement to the director setting forth the facts.

(3) Before the transfer of any well, the person who is to acquire it must obtain a permit and post a bond as required by section 10-010.

Hist: Filed 6-20-55 as GMI 2.

10-014 DRILLING PRACTICES. (1) Pits for Drill Cuttings: There shall be provided at every well before the actual drilling has been started, one or more pits of adequate and approved size for holding the drill cuttings removed from such well.

(2) Casing and Sealing Off Formations: Each oil, gas, brine, or fresh-water stratum above the producing horizon shall be cased and sealed off to prevent effectively the migration of oil, gas, brine, or fresh water to other areas. Such casing and sealing off shall be effected and tested in such manner and by such methods and means as may be prescribed by the director.

(3) Mud-laden Fluid to be Applied: No gas sand or stratum upon being penetrated shall be drilled or left open more than two days without the application of mud-laden fluid to prevent the escape of gas during further drilling in or through such sand stratum.

(4) Well-Head Equipment: No well shall be drilled into any formation where oil or gas under high pressure is expected to be found until the innermost string of casing shall have been equipped with an adequate high-pressure master gate valve and blow-out preventer securely anchored.

(5) Well Records (Logs): During the drilling or deepening of every well, exclusive of stratigraphic test wells and/or holes drilled solely for the purpose of seismograph operations, the owner, operator, contractor, driller, or other person responsible for the conduct of drilling operations, shall keep at the well a detailed and accurate record of the well, reduced to writing from day to day, which shall be accessible to the director upon order of the Board at all reasonable times. A copy of the records shall be furnished to the director within 30 days after the completion or abandonment of any well, but shall be kept confidential for a period of two years from the date of filing with the director.

(6) Deepening: Every person, owner, or producer who desires to deepen a well to a depth below that to which it was originally drilled shall file a written notice of intention to deepen. The notice shall set forth in detail the new proposed total depth, the plan for sealing off any oil, gas, brine, or fresh-water strata to be found or expected to be found in the deepening. If the method set forth is satisfactory and the person, owner, or producer is not in violation of the law or the rules of the Board, the director shall issue a deepening permit. The actual deepening shall not be started until the deepening permit has been posted at the well location.

10-016 IDENTIFICATION OF WELLS. Hereafter, every person drilling for oil or gas or operating, owning, or controlling or in possession of any well drilled for oil or gas, shall paint or stencil and post and keep posted in a conspicuous place near the well, the name of the person drilling, operating, owning, or controlling the well, the name of the lease, the number of the well, and the number of the permit for the well, together with the Section, Township, and Range.

10-018 ORGANIZATION REPORTS. Every person acting as principal or agent for another or independently engaged in drilling for oil or gas or in the production, storage, reclaiming, treating, or processing of crude oil or natural gas produced in Oregon shall immediately file with the Board in the form of an affidavit: the name under which such business is being conducted or operated; the name and postoffice address of such person, the business or businesses in which he is engaged; the plan of organization and, in case of a corporation, the law under which it is chartered and the name and postoffice address of any person acting as a trustee, together with the name of the manager, agent, attorney-in-fact, or principal executive thereof, and the name and postoffice address of each officer thereof. In each case where such business is conducted under an assumed name, such report shall show the names and postoffice addresses of all owners in addition to the other information required and also the name of the county in which the certificate of assumed name is filed. Immediately after any change occurs as to the facts stated in the report filed, a supplementary report under oath shall be immediately filed with the Board with respect to such change.

Hist: Filed 6-20-55 as GMI 2.

10-020 SURFACE EQUIPMENT. Meter fittings of adequate size to measure the gas efficiency for the purpose of obtaining gas-oil ratios shall be installed on the gas vent-line of every separator. Well-head equipment shall be installed and maintained in first-class condition so that static bottom hole pressure may be obtained at any time by the duly authorized agents of the Board or the director. Valves shall be installed so that pressures can be readily obtained on both casing and tubing.

10-122 BLOW-OUT PREVENTION. In drilling in areas where high pressures are likely to exist, all proper and necessary precautions shall be taken for keeping the well under control, including the use of blow-out preventers and high-pressure fittings attached to casing strings properly anchored and cemented.

10-124 DRILLING FLUID. At any time of drilling any well by rotary method, the operator shall continuously maintain in the hole, from top to bottom, good mud-laden fluid in accordance with recognized safe practice.

10-126 CLEANING WELLS. All wells shall be cleaned into a pit not less than one hundred fifty (150) feet from the derrick floor and one hundred fifty (150) feet from any fire hazard.

10-128 BOILER OR LIGHT PLANT. No boiler or electric lighting generator shall be placed nearer than 100 feet to any producing well or oil tank.

10-130 RUBBISH OR DEBRIS. Any rubbish or debris that might constitute a fire hazard shall be removed to a distance of at least 150 feet from the vicinity of wells, tanks, and pump stations. All waste shall be burned or disposed of in such manner as to avoid creating a fire hazard or polluting streams and fresh-water strata.

10-132 TUBING. All wells shall be equipped with, and produce through, tubing of not more than three inches in diameter. The bottom of tubing on flowing wells shall not be higher than 100 feet above the top of the producing sand. If the tubing is perforated, the perforations shall not extend above the top of the producing horizon. Tubing shall be free from obstructions, and have orange-peel weld or bar on the bottom in order to permit the free entrance of bottom hole instruments.

10-134 CHOKES. All flowing wells shall be equipped with chokes or beans adequate to control the flow thereof.

10-136 SEPARATORS. All flowing wells must be produced through an approved oil and gas separator.

10-138 FIRE WALLS. Every permanent

oil tank, or battery of tanks, must be surrounded by a dike or fire wall with a capacity of one and one-half times that of the tank or battery of tanks.

10-140 SLUSH PITS TO BE FILLED IN. Slush pits at producing oil wells must be filled in within a reasonable time after the completion of the well.

10-142 DEVIATION. Except by special permission of the Board the maximum point at which a well penetrates the producing formation shall not vary more than 60 feet from the vertical drawn from the center of the hole at the surface for each 1,000 feet of depth.

10-144 REPORT OF RESULT OF SHOOTING, PERFORATING OR TREATING OF WELL. Within 30 days after either the shooting or chemical treatment of a well, a report shall be filed with the director by the owner, giving the condition of the well after shooting, perforating, or treating, the size and depth of the shot or amount of chemical used, the daily production of oil, gas, and water after shooting or chemical treatment, the name of the person rendering such service, and any other pertinent information. Such report shall be signed and sworn to.

10-146 VACUUM PUMPS PROHIBITED. The use of vacuum pumps or other devises for the purpose of putting a vacuum on any gas or oil-bearing stratum is prohibited, unless, upon application and hearing, and for good cause shown, the Board shall permit the use of vacuum pumps.

10-148 PRODUCTION PRACTICE. Naturally flowing wells shall be produced at a continuous uniform rate as far as is practical, in keeping with the current allowable, unless the Board specifically permits stop-cocking to reduce the gas-oil ratio.

10-150 PULLING OUTSIDE STRINGS OF CASING. In pulling outside strings of casing from any oil or gas well, the space outside the casing left in the hole shall immediately be filled, and shall at all times be kept full of mud-laden fluid of adequate specific gravity to seal off all fresh and salt water strata and any strata bearing oil or gas which is not producing.

10-151 NOTIFICATION OF FIRE, BREAKS, LEAKS, OR BLOW-OUTS. (1) All persons controlling or operating any oil and gas wells, or receiving tanks, storage tanks, or receiving and storage receptacles into which crude oil is produced, received, or stored, shall immediately notify the Board by letter giving full details concerning all fires which occur at such oil or gas wells or tanks or receptacles on their property, and all such persons shall immediately report all tanks or receptacles struck by lightning and any other fire which destroys oil or gas, and shall immediately report any breaks in or from tanks or receptacles and pipe lines from which oil or gas is escaping or has escaped.

In all such reports of fires, breaks, leaks, or escapes, or other accidents of this nature, the location of the well, tank receptacle, or line break shall be given by Section, Township, Range, and property so that the exact location thereof can be readily located on the ground. Such report shall likewise specify what steps have been taken or are in progress to remedy the situation reported and shall detail the quantity of oil or gas lost, destroyed, or permitted to escape.

In case any tank or receptacle is permitted to run over, the escape thus occurring shall be reported as in the case of a leak. The report hereby required as to oil losses shall be necessary only in case such oil loss exceeds five barrels in the aggregate.

10-152 PRODUCING FROM DIFFERENT STRATA THROUGH THE SAME CASING STRING. No well shall be permitted to produce either oil or gas from different strata through the same string of casing without first applying for a hearing before the Board. The operator requesting such permission must present to the Board full and complete facts relative to the operation and the reasons for requesting such permission. If a stratum should be encountered bearing either oil or gas and it is desired to drill deeper, the stratum first penetrated and likewise each and every formation in turn shall be closed and sealed off to prevent waste, either surface or underground.

10-154 DETERMINING AND NAMING POOLS. Wells shall be classified as to the pool from which they produce and pools shall be determined and named by the director, provided, that in the event any person is dissatisfied with any such classification, an application may bemade to the Board for such classification as the applicant deems proper, and the Board will hear and determine the same.

10-156 SPACING UNITS. Immediately upon the discovery of any pool or at any time after the effective date of this rule, the Board may prescribe spacing units for each pool and specify the size, shape, and location thereof.

10-158 LOCATION AND SPACING OF WELLS. (1) Spacing Plan: Unless a different well-spacing plan is adopted the director will, simultaneously with the establishment of spacing units for each pool, prescribe well-spacing plans therefor, the boundaries of which shall coincide, if possible, with the boundaries of such spacing units, which plan shall require a minimum of a 40 acre spacing unless a different spacing shall be required or approved by the Board.

(2) Location of Well: Each well permitted to be drilled upon any spacing unit shall be drilled approximately in the center thereof with such exceptions as may be reasonably necessary where it is shown, after notice and upon hearing, and the Board finds, that the unit as established is partly outside the pool, where it is partly nonproductive, or, that for some other reason, a well approximately in the center of the unit would be nonproductive, or topographical conditions are such as to make the drilling in the center of the unit unduly burdensome.

(3) Exceptions: Whenever a uniform spacing plan has been prescribed for any pool exceptions thereto may be permitted if the Board finds, after notice and hearing, that conditions within such pool are such that reasonably uniform spacing would be impracticable.

10-160 POOLING OF SMALL TRACTS. When two or more separately owned tracts of land are embraced within a spacing unit which has been established by the Board, the owners thereof may pool their interests and develop their lands as a unit. Where, however, such owners have not agreed to pool their interests, the Board, for the prevention of waste or to protect correlative rights, may limit the allowable of each such owner to his reasonable prorata share of production from such spacing unit.

10-162 ILLEGAL PRODUCTION. No purchaser, producer, operator or any other person shall produce any crude oil, natural gas, or waste oil from any spacing unit or pool in this State except in accordance with the rules, regulations and orders of the Board: Provided that tank splitting shall not be required.

10-164 COMMINGLING OF PRODUCTION PROHIBITED. The production from one pool shall not be commingled with that from another pool in the same field before delivery to a purchaser, unless otherwise ordered by the Board.

10-166 REPORTS BY PURCHASERS AND PRODUCERS. (1) Purchasers: Each purchaser or taker of any oil or gas from any well, lease, or pool shall on or before the 25th day of each month succeeding the month in which the purchasing or taking occurs, file with the director on a form furnished by the Board, a verified statement of all oil or gas purchased, or taken from any such well, lease, or pool during the preceding month.

(2) Producers: The producer or operator of each and every well or spacing unit in prorated pools shall each month submit to the director a sworn statement showing the amount of production made by each well and by each such spacing

unit upon forms furnished therefor.

10-168 USE OF EARTHEN RESERVOIRS. Oil shall not be stored or retained in earthen reservoirs or in open receptacles.

10-170 RESERVOIR SURVEYS. By special order of the Board, periodic surveys may be made of the reservoirs in this State containing oil and gas. These surveys will be thorough and complete and shall be made under the supervision of the petroleum and natural gas engineers of the Board. The condition of the reservoirs containing oil and gas and the practices and methods employed by the operators shall be investigated. The volume and source of crude oil and natural gas; the reservoir pressure of the reservoir as an average; the areas of regional or differential pressure; stabilized gas-oil ratios; and the producing characteristics of the field as a whole and the individual wells within the field shall be specifically included.

10-172 OPERATORS TO ASSIST IN RESERVOIR SURVEYS. All operators of oil wells are required to permit and assist the agents of the Board and the director in making any and all tests including bottom hole pressure and gas-oil ratio determinations that may be required by the Board or director on any or all of their wells.

10-174 MEASUREMENT OF POTENTIAL OPEN-FLOW OF GAS WELLS. The potential open-flow of a gas well may be ascertained by U.S. Bureau of Mines back pressure method, or by other approved methods.

10-176 SUPERVISION OF OPEN-FLOW AND PRESSURE TESTS. All tests made in determining the potential flow and shut-in well-head or bottom hole pressure of a gas well and used in calculating the allowable of the spacing unit which the well is located shall be made under the supervision of representatives of the Board.

10-178 DURATION OF TESTS. The tests for open-flow and pressure of gas wells shall be made at such intervals and shall continue for such time as may be necessary to effect accurate determination, and in the case of pressure tests the shut-in period shall be not less than 24 hours.

10-180 NOTICE OF TESTS. Open-flow and pressure tests of gas wells may be witnessed or observed by a representative of any producer in the field, and the owners of the adjoining or offset leases must be notified by the owner of the well on which the test is to be taken, stating the time when such test will commence.

10-182 GAS TO BE METERED. (1) Meters: All gas when produced or sold shall be metered with an approved meter of sufficient capacity, provided that gas may be metered from a lease or unitized property as a whole if it is shown that ratable taking can be maintained; provided that meters shall not be required for gas produced and used on the lease for development purposes and lease operations.

(2) Meter Charts and Records: Purchasers shall keep meter charts and records on gas purchased in a permanent file, for a period of at least two years, and such information shall be made available to the Board and director.

(3) By-Passes: By-passes shall not be connected around meters in such manner as to permit the improper taking of gas.

10-184 DIRECT WELL PRESSURE. The use of direct well pressure to operate any machinery is hereby prohibited.

10-186 GAS-OIL RATIO. No well shall be permitted to produce gas in excess of the maximum ratio determined for a pool unless all gas produced in excess thereof is returned to the pool from which it was produced.

10-188 GAS-OIL RATIO SURVEYS AND REPORTS. Gas-oil ratios and surveys shall be taken in the manner prescribed by the Board for individual fields where upon gas-oil ratio limits have been fixed and in accordance with the rules prescribed for each individual pool.

(1) Flowing Wells Intermittently (Stop-

cocked) Produced: In computing the operating gas-oil ratio the total volume of gas and the total barrels of oil that are produced in order to obtain the daily oil allowable must be used regardless of the flowing time in the 24-hour period.

(2) Gas Lift or Jet Wells: The total volume of gas to be used in computing the operating gas-oil ratio is the total output volume minus the total input volume.

(3) Pumping Wells: Should gas be withdrawn from the casing in an attempt to maintain a fluid seal, or for any other reason, this volume of gas must be added to the gas produced through tubing in computing the gas-oil ratio.

10-190 GAS UTILIZATION. After the expiration of two days from the time of encountering gas in a gas well, no gas from such well shall be permitted to escape into the air, and no gas produced therefrom shall be utilized except for domestic or commercial purposes.

10-192 DISPOSAL OF BRINE OR SALT WATER. In addition to the requirement of the Act to prevent the escape of oil or gas out of one stratum to another and to prevent the pollution of fresh water supplies by oil, gas, or salt water, and in addition to any regulations of the State Sanitary Authority, the following conditions shall control the disposal of brine or salt water liquids, and any other means or methods of disposal, except re-injection into the formation, are hereby prohibited: (1) Disposal in Earthen Pits: Brine or salt water may be disposed of by evaporation when impounded in excavated earthen pits, which may be used for such purpose only when the pit is underlaid by tight soil such as heavy clay or hardpan.

Impounding of brine or salt water in earthen pits that are porous and closely underlaid by a gravel or sand stratum hereby is prohibited. Earthen pits used for impounding brine or salt water shall be so constructed and maintained as to prevent the escape of fluid.

The Board shall have authority to condemn any pit which does not properly impound such water and order the disposal of such water into an underground formation, as herein provided.

The level of brine or salt water in earthen pits shall at no time be permitted to rise above the lowest point of the ground surface level. All pits shall have a continuous embankment surrounding them sufficiently above the level of the surface to prevent surface water from running into the pit. Such embankment shall not be used to impound brine or salt water.

At no time shall brine or salt water impounded in earthen pits be allowed to escape over adjacent or into streams.

(2) Disposal by Injection: Salt water may also be disposed of by injection into the strata from which produced or other proved salt water bearing strata.

10-194 WATER INJECTION AND WATER FLOODING OF OIL AND GAS PROPERTIES. (1) Application and Approval: The owner or operator of any well may inject water under pressure into the formation containing oil or gas for the purpose of obtaining oil or gas from the reservoir, upon application to and approval by the Board.

(2) Casing and Cement: Wells used for the injection of water into the producing formation or repressuring wells shall be cased with sound casing so as not to permit leakage and the casing cemented in such manner that damage will not be caused to oil, gas, or fresh water resources.

(3) Application, Contents, Notice, Objection, Hearing, and Approval: (a) No water injection or water flooding program shall be instituted until it has been regularly authorized by the Board.

(b) The application therefor shall be verified and filed with the Board, showing:

(A) The location of the intake well.

(B) The location of all oil and gas wells, including abandoned and drilling wells and dry holes, and the name of landowners and lessees within one-half mile of the intake well.

(C) The formations from which wells are producing or have produced.

(D) The name, description, and depth of the formations to be flooded

(E) The depths of each formation into

which water is to be injected.

(F) The elevations of the top of the oil or gas bearing formation in the intake well and the wells producing from the same formation within one-half mile radius of the intake well.

(G) Log of the intake well or similar information as is available.

(H) Description of the intake well casing.

(I) Description of the liquid, stating the kind, where obtained, and the estimated amounts to be injected daily.

(J) The names and addresses of the operators.

(K) Such other information as the Board may require to ascertain whether the flooding may be safely and legally made.

(c) Applications may be made to include the use of more than one intake well on the same lease, or on more than one lease.

(d) Applications shall be executed by all operators who are to participate in the proposed water injection or water flooding plan.

(e) No order approving water injection or water flooding of oil properties shall be issued until after notice has been given by the Board to each operator in such pool, and hearing has been had before the Board.

(4) Notice of Commencement and Discontinuance of Water Injection or Water Flooding Operations:

(a) Immediately upon the commencement of water injection or water flooding operations, the applicant shall notify the Board stating the date of commencement.

(b) Within 10 days after the discontinuance of water injection or water flooding operations the applicant or the one in charge thereof shall notify the Board of the date of such discontinuance and the reasons therefor.

(c) Before any intake well shall be abandoned, notice shall be served on the Board, and the same procedure shall be followed in the plugging of such well as provided for the plugging of oil and gas wells.

(5) Records: The owner or operator of an intake well shall keep an accurate record of (a) the amount of water injected into the intake wells, (b) the total amount of water produced, and (c) the total amount of oil produced from the area flooded. Such information shall be made available to the Board or its agents.

10-196 GAS INJECTION OF OIL AND GAS PROPERTIES. (1) Application and Approval: The owner or operator of any well may inject gas under pressure into the formation containing oil or gas for the purpose of obtaining oil or gas from the reservoir, upon application to and approval by the Board.

(2) Casing and Cement: Wells used for the injection of gas into the producing formation shall be cased with sound casing so as not to permit leakage and the casing cemented in a manner that damage will not be caused to oil, gas, or fresh water resources.

(3) Application, Contents, Notice, Objection, Hearing and Approval: (a) No gas shall be injected into a well for gas injection purposes until so ordered by the Board pursuant to application and notice as herein required.

(b) The application shall be verified and filed with the Board showing:

(A) The location of the intake well.

(B) The location of all oil and gas wells, including abandoned and drilling wells and dry holes, and the name of landowners and lessees within one-half mile of the intake well.

(C) The formations from which wells are producing or have produced.

(D) The name, description, and depth of the formations to be injected.

(E) The depths of each formation into which gas is to be injected.

(F) The elevations of the top of the oil or gas bearing formation in the intake well and the wells producing from the same formation within one-half mile of the intake well.

(G) The log of the intake well, or similar information as is available.

(H) Description of the intake well casing.

(I) Description of the gas, stating the kind, where obtained, and the estimated amounts to be injected daily.

(J) The names and addresses of the operators.

(K) Such other information as the Board

may require to ascertain whether the gas injection plan meets the requirements of the law and safety.

(c) Applications may be made to include the use of more than one intake well on the same lease or on more than one lease.

(d) Applications shall be executed by all operators who are to participate in the proposed gas injection plan.

(4) Notice of Commencement and Discontinuance of Gas Injection: (a) Immediately upon commencement of gas injection operations, the applicant shall notify the Board stating the date of commencement.

(b) Within 10 days after the discontinuance of gas injection operations, the applicant or the one in charge of the operations shall notify the Board of the date of discontinuance and the reasons therefor.

(c) Before any intake well shall be abandoned, notice shall be served on the Board and the same procedure shall be followed in the plugging of such well as provided for the plugging of oil and gas wells.

(5) Records: The owner or operator of the gas injection project shall keep an accurate record of (a) the amount of gas injected into the intake wells, (b) the amount of gas produced and (c) the amount of oil produced from leases affected by the gas injection. Such information shall be made available to the Board or its agents.

10-198 ABANDONMENT, UNLAWFUL ABANDONMENT, SUSPENSION, WELL PLUGGING. (1) Oil, Gas, and Water to be Protected: Before any well or any producing horizon encountered therein shall be abandoned, the owner or operator shall use such means, methods, and procedure as may be necessary to prevent water from entering any oil or gas-bearing formation, and to protect any underground or surface water that is suitable for domestic or irrigation purposes from waste, downward drainage, harmful infiltration and addition of deleterious substances.

The operator of any hole drilled for oil and gas which penetrates a usable fresh-water horizon, except those drilled for the purposes of seismic prospecting, shall be required to set casing through this formation and cement such casing from top to bottom, unless special exception is granted by the Board.

(2) Suspension: Removal of Equipment: Application: Extension: The Board may authorize a permittee to suspend operations or remove equipment from a well for the period stated in the Board's written authorization, given upon written application of the permittee and his or its affidavit showing good cause. The period of suspension may be extended by the Board, upon written application made before expiration of the previously authorized suspension, accompanied by affidavit of the permittee showing good cause for the granting of such extension.

(3) Abandonment: Notice of Intention: Presumptions: (a) Before any work is commenced to abandon any well drilled for oil or gas, the permittee shall give written notice to the Board of his intention to abandon such well. The notice shall be upon forms supplied by the Board and shall contain the permit number of the well and such other information as reasonably may be required by the Board.

(b) After operations on or at a well have been suspended with the approval of the Board pursuant to subsection (2) of this rule, if operations are not resumed within six months from the date specified in such approval of suspension, an intention to abandon and unlawful abandonment shall be presumed unless the permittee has obtained from the Board an extension of time of such suspension, upon his or its written application and affidavit showing good cause for the granting of such extension.

(c) Whenever operations on or at any well shall have been suspended for a period of six months without compliance with these regulations, the well shall be presumed unlawfully abandoned.

(d) A well shall be deemed unlawfully abandoned if, without notice given to the Board as required by these rules, any drilling or producing equipment is removed.

(e) Any unlawful abandonment under these regulations shall be declared by the Board and such declaration of abandonment shall be entered in the Board minutes and written notice thereof mailed by registered mail both to such permittee at his last known post office address as disclosed by the records of the Board and to the permittee's surety; and the Board may thereafter proceed against the permittee and his or its surety.

(f) All wells abandoned or declared abandoned as herein provided shall be plugged as required by law and by these regulations.

(g) The bond furnished by permittee shall not be released until all procedures required by these regulations shall have been completed and the Board in writing shall have authorized such release.

(4) Plugging Methods and Procedure: The methods and procedure for plugging a well shall be as follows: (a) The bottom of the hole shall be filled to the top of each producing formation, or a bridge shall be placed at the top of each producing formation, and in either event a cement plug not less than 15 feet in length shall be placed immediately above each producing formation whenever possible.

(b) A cement plug not less than 15 feet in length shall be placed approximately 50 feet below all freshwater bearing strata.

(c) A plug shall be placed at the surface of the ground in each hole plugged in such manner as not to interfere with soil cultivation.

(d) The interval between plugs shall be filled with an approved heavy mud-laden fluid.

(e) The operator shall have the option as to the method of placing cement in the hole by (A) dump bailer, (B) pumping through tubing, (C) pump and plug, or (D) other method approved by the Board.

(5) Affidavit on Completion: Copies: Within 20 days after the plugging of any well has been accomplished, the owner or operator thereof shall file an affidavit with the director setting forth in detail the method used in plugging the well. Such affidavit shall be made on a form supplied by the Board. Copies of well-plugging records and affidavits filed, except those relating to core drilling and seismic or other wells drilled for geological data, will be furnished to anyone requesting them on payment of 50 cents per copy.

(6) Seismic Core and Other Exploratory Holes to be Plugged: Methods: Affidavit: Before abandoning any hole drilled for seismic, core, or other exploratory purposes, which hole penetrates a usable fresh-water horizon, it shall be the duty of the owner or driller of such hole to plug the same in such manner as to protect properly all water-bearing formations; and within 60 days after the plugging, an affidavit shall be filed with the Director by the owner or driller, setting forth the location of the holes and the method used in plugging the same to protect water-bearing formations.

(7) Wells Used for Fresh Water: (a) When the drilled well to be plugged may safely be used as a fresh-water well and such use is desired by the land owner, the well need not be filled above the required sealing plug set below fresh water; provided, however, authorization for use of any such well shall be obtained from the State Engineer, in conformance with chapter 708, Oregon Laws 1955.

(b) Application for leaving the well partially unplugged as a fresh-water well may be made to the Board by the land owner, accompanied by his affidavit as to his need of water and the intended use of the well, together with certified copy of the State Engineer's order or permit, or that officer's statement that no permit is required.

(c) The operator shall leave the fresh-water well in a condition approved by the Board.

Hist: Filed 4-3-56 as GMI 3.

10-200 CONFIDENTIAL INFORMATION. No information herein required to be furnished to the Board shall be disclosed by any employee of the Board except as expressly authorized by the Board.

APPENDIX J

STATE OF OREGON"S DEPARTMENT OF ENVIRONMENTAL QUALITY ADMINISTRATIVE RULES AND REGULATIONS IN AN OIL AND GAS OPERATION

J

[redacted]

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE MEMO

To: Mr. R. E. Corcoran, State Geologist
Department of Geology and Mineral Industries

Date: September 2, 1975

From: Mr. Loren Kramer, Director
Department of Environmental Quality

Subject: SPECIAL CONDITIONS TO APPLY TO ALL DEEP WELL EXPLORATORY DRILLING IN OREGON

1. If a geothermal, mineral or petroleum resource of commercial interest is discovered, no drilling of additional wells or operations in connection therewith shall commence until an Environmental Impact Statement has been prepared for utilizing and developing the resource.

2. Prior to commencement of any drilling activities where drilling depth is expected to be in excess of 1,000 feet, detailed plans and specifications shall be submitted to and approved by the Department of Environmental Quality for collection and disposal of drill cuttings and mud, and other potential waste materials.

3. A contingency plan shall be submitted to the Department of Geology and Mineral Industries prior to any deep well drilling activities outlining the following information procedures.

    a. Measures taken to prevent emergency conditions or unplanned discharges, such as blowouts.

    b. A description of preventive facilities to contain or treat unplanned discharges.

    c. The reporting system to be used to alert facility management and appropriate legal authorities.

    d. A list of personnel and equipment available to respond to emergency conditions.

4. Upon determination of the Director of the Department of Environmental Quality or the Director of the Department of Geology and Mineral Industries that any activities conducted by the permittee in relation to its drilling operations or activities may tend to or will cause damage, hazards, pollution or risk to the environment of Oregon or may violate any conditions of permits issued by the aforementioned departments, the permittee shall when notified either orally or in writing by the Director of either department immediately cease and desist its drilling operations or activities until the problem has been corrected.

5. All drilling processes and all waste mud and waste waters collection, treatment and disposal facilities shall be operated and maintained at all times in a manner which will prevent a direct discharge or indirect discharge of any waste mud and waste waters to the waters of the state.

DEQ 4

6. All waste mud and waste waters are to be discharged into self-contained, non-overflow holding ponds.

7. All access roads, trails, drainage systems and the drilling site shall be constructed and maintained to minimize soil disturbances, control erosion and prevent channeling.

8. All refuse shall be disposed of at a refuse site which has a valid permit from the Department of Environmental Quality.

9. No geothermal waters, mineralized waters, oily waters or other waters or substances which might cause the Water Quality Standards of the State of Oregon to be violated shall be discharged or otherwise allowed to reach any of the waters of the state unless a permit for the discharge has been issued by the Department of Environmental Quality.

10. Sanitary wastes shall be disposed of in chemical or gas fired toilet facilities which have been installed in accordance with the recommendations of the Department and the local county health department or by other approved means.

11. In the event a breakdown of equipment or facilities causes a violation of any of the conditions of this permit or results in any unauthorized discharge, the permittee shall:

    a. Immediately take action to stop, contain and clean up the unauthorized discharges and correct the problem.

    b. Immediately notify the Department of Environmental Quality and the Department of Geology and Mineral Industries so that an investigation can be made to evaluate the impact and the corrective actions taken and determine additional action that must be taken.

    c. Submit a detailed written report describing the breakdown, the actual quantity and quality of resulting waste discharges, corrective action taken, steps taken to prevent a recurrence and any other pertinent information.

    Compliance with these requirements does not relieve the permittee from responsibility to maintain continuous compliance with the conditions of this permit or the resulting liability for failure to comply.

12. Authorized representatives of the Department of Environmental Quality or the Department of Geology and Mineral Industries shall be permitted access to the premises of all facilities owned and operated by the permittee at all reasonable times for the purpose of making inspections, surveys, collecting samples, obtaining data and carrying out other necessary functions related to this permit.

APPENDIX K

PUBLIC INTEREST

SOLICITED AND RECEIVED

K

Oil And Gas Lease Proposed

The Burns BLM District and the Snow Mountain District of the Ochoco National Forest invites the public to participate in an Environmental Analysis.

The Environmental Impacts of proposed oil and gas leasing and a proposed exploratory oil and gas well to be drilled on BLM land by Standard Oil of California are to be assessed by the Bureau of Land Management and the Forest Service.

About 150,000 lease acres are held by Standard Oil of California in an area beginning one mile west of Hines transgressing to the north and west and terminating three miles north of Emigrant Butte.

Prior to the issuance or rejection of the applications, an Environmental Analysis will be made of the probable impact of leasing, the exploratory well, and possible development. Factors to be considered include impacts on air, water, land, plants, animals, ecological processes and local communities.

The district would appreciate factual information concerning the net impact on the environment which would likely result if oil and gas leases were issued. Comments would be most useful if received during February as BLM's and Forest Service analysis proceeds. Please address your comments to:

Burns District Office
Bureau of Land Management
74 South Alvord
Burns, OR 97720

March 3, 1849

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Burns District Office
74 South Alvord, Burns, Oregon 97720

IN REPLY REFER TO
3110

INVITATION TO PARTICIPATE

Dear Sir:

The Burns District Office of the Bureau of Land Management in conjunction with the Snow Mountain District of the Ochoco National Forest is in the process of preparing an Environmental Analyses concerning the effect of oil and gas leasing and possible development on the approximate area of the enclosed map.

Standard Oil of California, the leasee applicant, has indicated that they plan to drill an exploratory well on national resource lands in the N½SW¼ Section 3, T. 23 S., R. 29 E. The proposed well site will disturb approximately 1 acre of surface.

Factors which will be considered in the preparation of the Environmental Analysis document include impacts on air, land, water, terrestrial plants and animals, ecological processes, landscape character, sociocultural interests, and others. If you have any comments on the effect of oil and gas leasing and the proposed exploratory drilling on the environment of this area, we would appreciate your comments by March 18, 1976.

If this letter generates sufficient interest and comment to justify a public meeting, a meeting will be held. Your comments are welcomed. Please send your comments to:

Burns District Office
Bureau of Land Management
74 South Alvord
Burns, Oregon 97720

Sincerely yours,

L Christian Vosler

District Manager, Burns District
Bureau of Land Management

District Ranger, Snow Mountain District
Ochoco National Forest

Federal Agencies

U. S. Fish and Wildlife Service
Malheur National Wildlife Refuge
Burns, Oregon

U. S. Fish and Wildlife Service
Division of Ecological Services
Portland, Oregon

U. S. Bureau of Reclamation
Boise, Idaho

U. S. Environmental Protection Agency
Seattle, Washington

U. S. Soil Conservation Service
Portland, Oregon

U. S. Geological Survey
Menlo Park, California

State Agencies

Oregon State Highway Division
LaGrande, Oregon

Oregon Department of Land Conservation and Development
Salem, Oregon

Local Government Relations Division
State of Oregon
Salem, Oregon

Oregon Department of Geology and Mineral Industries
Portland, Oregon

State Clearing House
Salem, Oregon

Oregon Department of Fish and Wildlife
Salem, Oregon and Hines, Oregon

Oregon Department of Energy
Salem, Oregon

Oregon Department of Lands
Salem, Oregon

Oregon Department of Economic Development
Salem, Oregon

Edward Long
Historic Preservation Archeologist
State Historic Preservation Office
Salem, Oregon

Groups and Individuals

Oregon Environmental Council
Portland, Oregon

Oregon Wildlife Federation
Portland, Oregon

Oregon Student Public Interest Research Group
Portland, Oregon

Izaak Walton League
Burns, Oregon

Survival Center
Eugene, Oregon

Sierra Club
Eugene, Oregon

Oregon Cattlemen's Association
Burns, Oregon

City of Hines
Hines, Oregon

Oregon High Desert Study Group
Burns, Oregon

Standard Oil of California
San Francisco, California

Oregon State University
Corvallis, Oregon

University of Oregon
Eugene, Oregon

Portland State University
Portland, Oregon

Russell Pengelly
Burns, Oregon

Dr. Robert Fulton
Burns, Oregon

Robert E. Cole
Burns, Oregon

Don Toelle
Burns, Oregon

Pat Wheeler
Hines, Oregon

Dale White
Burns, Oregon

City of Burns
Hines, Oregon

Harney County Planning Commission
Burns, Oregon

Harney County Court
Burns, Oregon

Oregon Museum of Natural History
Eugene, Oregon

Gordon Glass
John Day, Oregon

Arlie Oster
Burns, Oregon

Warren E. Miller
Kimberly, Oregon

Carl L. Mayo
Riley, Oregon

Julie Ambler
Corvallis, Oregon

George S. Hansen
Mt. Vernon, Oregon

March 3, 1849

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Malheur National Wildlife Refuge
P. O. Box 113
Burns, Oregon 97720

March 15, 1976

Employee	Act	Info	Employee	Act.	Info
DM			AM 1		
Adm.			AM 2		
			AM 3		
			AM 4		
Receive MAR 17 1976 DISTRICT BURNS					
Resources			Opns		
Geo					
All Emp.			File		

Mr. Chris Vosler
District Manager, Burns District
Bureau of Land Management
75 South Alvord
Burns, Oregon 97720

Dear Chris:

In regard to your March 8, 1976 letter, I appreciate the opportunity to comment about the oil and gas leasing and development proposal for the Riddle Mountain area.

I doubt that leasing or development would have any significant impact on the refuge.

From a personal standpoint, I know this area rather well as an extremely important area for resident wildlife. I would be quite concerned about the effects of leasing and development activities on the area's value to mule deer, antelope, sage grouse, chukar partridge and other wildlife species.

I assume that the Oregon Department of Fish and Wildlife will be evaluating this proposal, and will be providing you with their assessment of wildlife related impacts.

Sincerely,

Joseph P. Mazzoni

Joseph P. Mazzoni
Refuge Manager

cc: Vic Masson

AMERICAN REVOLUTION BICENTENNIAL 1776-1976

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Division of Ecological Services
Portland Field Office
919 N.E. 19th Avenue
Portland, Oregon 97232

Reference: ES

Employee	Act	Info	Employee	Act.	Info
DM			AM 1		
Adm.			AM 2		
			AM 3		
			AM 4		
Receive MAR 25 1976 DISTRICT BURNS					
Resources			Opns		
Eco					

March 24, 1976

MEMORANDUM

To : District Manager, Bureau of Land Management, Burns, Oregon

From : Field Supervisor, Fish and Wildlife Service, Portland, Oregon

Subject: Effects of Oil and Gas Leasing in the Burns Area (Reference 3110)

Your Invitation to Participate requested our comments concerning the effect of oil and gas leasing and possible development on a 1-acre site southwest of Burns.

The lease site lies within the watershed of Malheur National Wildlife Refuge and an intensive migratory bird use area. We are very concerned that activities related to the lease development could either directly or indirectly destroy valuable fish and wildlife resources. It is emphasized that our concern is not restricted to impacts which occur locally but also extend to the effects felt at distant locations within the flyway because of the migratory nature of many of the birds utilizing the area.

Drilling activities pose a serious threat which we believe should be identified. Lubricants, powdered soil or rock, ground water, and oil are by-products of drilling that have undesirable physical and/or chemical qualities. The discharge of these must be carefully controlled to prevent their introduction into the streams and waters of the basin. Lagooning of these wastes could also pose a serious threat as water-oriented birds would be attracted to the lake-like area and would die after exposure to surface floating oils.

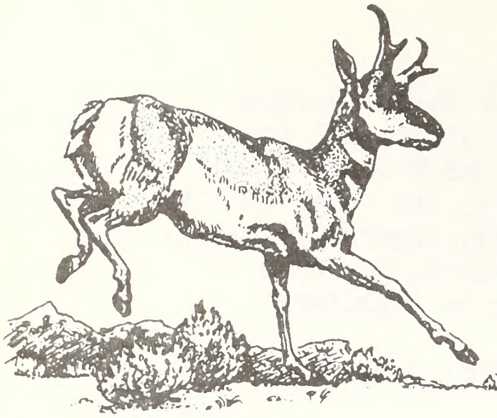
Preliminary oil and gas development in the identified area would cause some disturbance of fish and wildlife habitat. How much disturbance would depend on what care is taken to avoid detrimental exploration and construction practices. Improper road construction, for example, can result in denuded hillsides and streambanks. Such practices often lead to erosion problems which, in turn, can result in deteriorating water quality and loss of fish and wildlife habitat.

Our immediate concern is to preserve the integrity of the lease-site environment. To accomplish this, we urge you to coordinate all activities with the Oregon Department of Fish and Wildlife and the U.S. Fish and Wildlife Service, and we recommend strict adherence to the water quality regulations of the Department of Environmental Quality regarding land development. The proposed regulations recommended by the Division of State Lands regarding leasing activities should also be considered.

We appreciate having the opportunity to comment on this proposal.

Please continue to provide us with notices of similar actions.

R O Weaver
for John W. Kincheloe



Oregon High Desert
Study Group

720 S.E. Park
Corvallis, Or. 97330
Mar. 18, 1976

COLLEEN GOODING
COORDINATOR

POST OFFICE BOX 25 ▪ ST. PAUL, OREGON 97137

Employee
SM
Adm.
AM 1
AM 2
AM 3
AM 4
Received MAR 1 9 1976 DISTRICT BURNS
Resources
Opns

Mr. Christian Vosler, District Manager
Burns District Office, BLM
74 S. Alvord
Burns, Or. 97720

Dear Mr. Vosler:

We appreciate the opportunity to comment on the EAR for the proposed oil and gas leases in the Burns District and the Snow Mt. District of the Ochoco N.F. We feel you should consider writing an EIS. The case of oil and gas leases is similar to geothermal leases--both can lead to development of the site which would result in major environmental impacts. Site specific EISs, at least by state, will be prepared for oil and gas leasing on the continental shelf.

A draft EIS would reveal potential land use conflicts, and allow the public to respond to them. A draft EIS presents alternatives with usually a preferred action. Some of these alternatives mitigate possible conflicts. In the final EIS, the agency responds to the public comments and makes a final recommendation.

The EAR for oil and gas leasing on BLM and N.F. lands just northwest of Burns should consider alternative land uses and their relative value to oil and gas development. Considerations should especially include the value of the land for existing uses: deer winter range, cattle grazing, timber harvest, and watershed (Willow Creek). Socio-economic factors may be important, since the area is close to Burns. There are no BLM roadless or scenic areas, and no Ochoco N.F. roadless areas in the proposed lease area. Since the exploratory wells require disturbance of the surface--one acre per well, impacts on possible unique vegetation, archeological sites, and critical wildlife habitat should be evaluated.

Sincerely,

Julie Ambler

Julie Ambler, OHDSG Burns Dist. Representative

cc: Donald F. Rotetl, Snow Mountain District Ranger
Russell Pengelly, Ochoco N.F. Land use planning advisory committee
Dave Brown, Ochoco N.F. Land use planning advisory committee

CITY OF HINES

HINES, OREGON 97738

Employee	Act	Info	Employee	Act.	Info
DM			AM 1		
Adm.			AM 2		
			AM 3		
			AM 4		
Received MAR 17 1976 DISTRICT BURNS					
Resources			Opns		
All Emp.			File		

March 15, 1976

Mr. L.C. Vosler, District Manager
Bureau of Land Management
Burns District Office
74 South Alvord
Burns, Ore. 97720

Dear Mr. Vosler:

The Hines Common Council received your letter regarding Standard Oil of California's exploratory well.

Our only comment would be for you to go ahead with the exploration on the national resource lands if you think it will be beneficial to our area.

Respectfully submitted,

HINES COMMON COUNCIL

Carolyn Negus, Mayor

Mary C. Benitez
Mary C. Benitez, City Clerk

mcb

OREGON PROJECT NOTIFICATION AND REVIEW SYSTEM

STATE CLEARINGHOUSE

Intergovernmental Relations Division
240 Cottage Street S.E., Salem, Oregon 97310
Leslie Lehmann, Coordinator Ph: 378-3732

Employee
DM
Adm.
AM 2
AM 3
AM 4
MAR 1 1976 DISTRICT BURNS
Opns

STATE A-95 REVIEW CONCLUSIONS

APPLICANT: Burns District Office; Bureau of Land Management

PROJECT TITLE: Oil & Gas Leasing in Ochoco Nat'l Forest
Oil & Gas Leasing in Snow Mt. Dist. of Ochoco Nat'l Forest

DATE: March 11, 1976

The state has reviewed your project and reached the following conclusions:

☒ No significant conflict with the plans, policies or programs of state government have been identified ~~and your proposal is endorsed as presented~~.

☒ Relevant comments of state agencies are attached and should be considered in the final design of your proposal.

☐ Potential conflicts with the plans and programs of the state agency(s) have been satisfactorily resolved. No significant issues remain.

☐ Significant conflicts with the plans, policies or programs of state government have been identified and remain unresolved. The final proposal has been reviewed and the final comments and recommendations of the state are attached.

NOTICE TO FEDERAL AGENCY

The following is the officially assigned State Identifier Number:

7602-5-470 and
7602-5-760

This number should be used on all correspondence and particularly on SF 240 as required by OMB A-98.

K-10

PNRS #2

OREGON STATE HIGHWAY DIVISION

Region 5 Office

P. O. Box 850 ... La Grande, Oregon 97850 ... Phone 963-3177

ROBERT W. STRAUB
~~TOM McCALL~~
GOVERNOR

F. B. KLABOE
Administrator and
State Highway Engineer

Employee Act
DM
Adm.
AM 1
AM 2
AM 3
Received MAR 1976
Resources
Opns

March 15, 1976

Mr. L. Christian Vosler
District Manager
Bureau of Land Management
74 S. Alvord
Burns, Oregon 97720

Dear Mr. Vosler:

The Oregon State Highway Division has considered the effects of oil and gas leasing and possible development in the area south of Burns on Highway 78 and sees no adverse effects upon our property as a result of the activity.

We do expect all laws and regulations relevant to highway matters to be complied with.

Thank you for the opportunity to comment on this.

Sincerely,

W. E. Schwartz
Regional Engineer

By Bob Aldrich

Bob Aldrich
Regional Office Engineer

BA:sh

cc R. L. Schroeder w/attach
C. K. Ansell w/attach

STATE OF OREGON 1859

DEPARTMENT OF FISH AND WILDLIFE

307 STATE OFFICE BLDG. • 1400 S.W. 5th AVE. • PORTLAND, OREGON • 97201

ROBERT W. STRAUB
GOVERNOR

COMMISSIONERS

ALLAN L. KELLY
Chairman

FRANK POZZI
Vice Chairman

MRS. ALLEN BATEMAN
Member

JOHN BOYER
Member

WALTER H. LOFGREN
Member

McKEE A. SMITH
Member

JACK STEIWER
Member

JOHN W. McKEAN
Director

March 9, 1976

Employee
DM
Adm.
AM 1
AM 2
AM 3
AM 4
Receive: MAR 10 1976 DISTRICT BURNS
Resources
Opns
25

District Manager
Burns District Office
Bureau of Land Management
74 South Alvord
Burns, Oregon 97720

Dear Sir:

We have received additional comments from our field biologists since those submitted through the State Clearinghouse review of Standard Oil of California's oil and gas leasing program. Attached are these comments.

We suggest that further coordination with our department be through our biologists, Ellis Mason and Al Polenz, 573-6582, Hines.

Sincerely,

Norman Behrens

NORMAN BEHRENS
ENVIRONMENTAL MANAGEMENT SECTION

Attachment

Comments on Standard Oil of California

Oil and Gas Leasing and Development

Exploratory Well

This work should have a minimal impact on wildlife and wildlife habitat. If it requires road construction, suggest the road(s) be closed and restored to their natural condition upon completion of work.

May be able to get a water development out of this work as they will need water for the drilling.

The work should be done from late spring through early fall to prevent harassment of wintering mule deer.

Oil and Gas Leasing

This could be an entirely different situation. A growing antelope herd of approximately 40 animals is present on Willow Flat from April - May through November. Resident deer are scattered throughout much of the lease area and a large portion of the area is important deer winter range. A small elk herd is present in the Dry Mountain vicinity (off the lease area), and there are some elk along the north boundary of the lease area. These northern boundary animals drift on and off the lease area during the year. There is also a small sage grouse population on Willow Flat.

Oil field development could have an adverse effect on all big game populations as well as the sage grouse. Access development and its increased vehicular travel would cause added harassment simply by its presence. This would also make it easier for people to move through the area and thus make the animals more vulnerable to poaching. The development activities would displace some animals for an indefinite period of time. This would be especially undesirable during the winter stress period. Coordination would be extremely important to reduce this situation.

Intensive development in Willow Flat could easily cause the antelope to move to another area, if available. There is the possibility we could lose that herd altogether if enough favorable habitat is not found. Once any field came into production there would probably be little disturbance except for well and pump station maintenance. Any displaced animals may begin moving back into the area at this time of reduced activity following development.

Hunting recreation is popular in this portion of the Silvies Game Management Unit. Based on 1974 figures (the latest available), the recreational value of big game within the lease area is as follows:

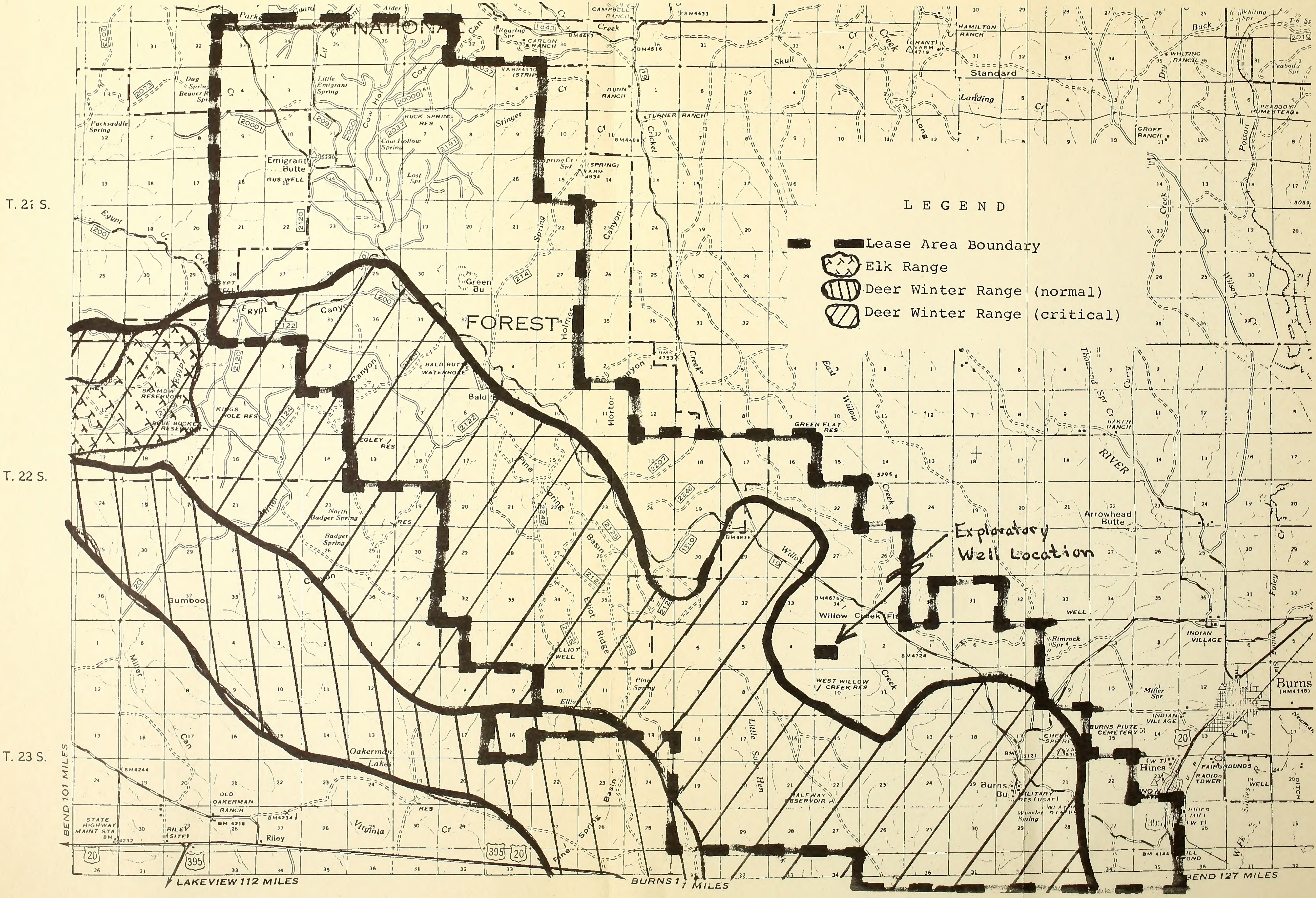
Deer: 1,425 hunter days = \$45,600 + \$3,000 meat value = \$48,600.
Elk: 40 hunter days = \$940.
Antelope: 8 hunter days = \$256 + \$50 meat value = \$306.

The total for the three big game species is \$49,846 annually from hunting within the lease area. There is also a value for the viewing which these animals provide and for the presence of the many species of non-game wildlife on the lease area. We have no means of presently determining the dollar value for these items. At least 75-80 species of birds can be found on the lease area along with approximately 20 species of amphibians and reptiles. In addition, numerous rabbits, ground squirrels, pine squirrels, coyotes, bobcats, badgers, etc., are present.

Except for the possibility of greatly increased access, it is doubtful if this work would have as much impact on the area as a timber sale.

Additional species found in the oil and gas leasing area are:

Pacific tree frog
Great Basin fence lizard
Northern sagebrush lizard
Northern side-blotched lizard
Pigmy horned lizard
Northern horned lizard
Western skink
Great Basin whiptail
Rocky Mountain rubber boa
Western yellow-bellied racer
Striped whipsnake (?)
Gopher snake
Valley garter snake
Wandering garter snake
Northern Pacific rattlesnake


LEGEND
Lease Area Boundary
Elk Range
Deer Winter Range (normal)
Deer Winter Range (critical)
Exploratory Well Location
T. 21 S.
T. 22 S.
T. 23 S.
NATIONAL
FOREST
Emigrant Butte
Egypt
Green Bu
Bald
Willow Creek Flat
Arrowhead Butte
RIVER
Burns
Hines
Riley
Oakerman Lakes
BEND 101 MILES
LAKEVIEW 112 MILES
BURNS 17 MILES
BEND 127 MILES

OREGON STATE
HIGHWAY DIVISION

HIGHWAY BUILDING • SALEM, OREGON • 97310

ROBERT W. STRAUB
GOVERNOR

Receive MAR 1 1976 DISTRICT BURNS

Resources

February 26, 1976

Mr. L. Christian Vosler
District Manager
Bureau of Land Management
74 S. Alvord Street
Burns, Oregon 97720

Dear Mr. Vosler:

This letter is in regards to No. 3100 dated February 23, 1976, regarding an Environmental Analysis Record for two areas within your jurisdiction.

First, let me address myself to archeological sites. There are no complete surveys of the large areas involved. Partial surveys in and near the areas indicate a probable density of some three or four archeological sites per square mile. There are important quarry sites known in Sections 18 and 19 of T24S and R27E. A cave site explored by Mr. David Chance in Sec. 31 of T24S R28E was reported to the BLM in 1969. In the same year, Mr. Chance reported another site in Sec. 36 of T28S R36E. Last year, Prof. David Cole of the Oregon Museum of Natural History in Eugene located a large number of sites around the dry lakes in the area south of the highway. In addition, the area of Folly Farm is rich in petroglyphs. It would be advisable to identify as narrowly as possible areas of potential ground-disturbing activity and then have them surveyed by a professional archeologist. Keep in mind, however, that in rich areas such as these, as much as five days could be required to adequately survey one square mile.

A check of the National Register and the Statewide Inventory shows no sites within the survey area on either list. Due to the lack of Historical surveys, however, it would be advisable to have an historian conduct a survey. I am enclosing a list of recommended historians who would be able to carry out such a survey.

K-17

If our office can be of any further assistance to you, please feel free to contact us.

Sincerely,

Edward T. Long

Edward T. Long
Historic Preservation Archeologist
State Historic Preservation Office

EL:ko

Enc.

K-18

OREGON PROJECT NOTIFICATION AND REVIEW SYSTEM

STATE CLEARINGHOUSE

Intergovernmental Relations Division
240 Cottage Street S.E., Salem, Oregon 97310
Leslie Lehmann, Coordinator Phone: 378-3732

DEPARTMENT OF LAND CONSERVATION AND DEVELOPMENT
FEB 24 1976

LOCAL GOVERNMENT RELATIONS DIV
MAR 10 1976

PNRS STATE REVIEW

SALEM

Project #: 7602 5 760 Due Date: ~~MAR 05 1976~~

To Agency Addressed: If you intend to comment but cannot respond by the return date, please notify us immediately. If no response is received by the due date, it will be assumed that you have no comment and the file will be closed.

PROGRAM REVIEW AND COMMENT

To State Clearinghouse: We have reviewed the subject Notice and have reached the following conclusions on its relationship to our plans and programs:

( ) It has no adverse effect.

( ) We have no comment.

( ) Effects, although measurable, would be acceptable.

( ) It has adverse effects.

( ) We are interested but require more information to evaluate the proposal.

( ) Please coordinate the implementation of the proposal with us.

(✓) Additional comments for project improvement. (Attach if necessary)

- - - - - - - - - - -

The impact of leasing and possible development on the local communities and county should be examined in light of the local comprehensive plan. All actions should be coordinate with the local jurisdictions.

K-19

Agency LCDC 3/9 By

803-6.4

JC

FEB [illegible] 1976

OREGON PROJECT NOTIFICATION AND REVIEW SYSTEM

STATE CLEARINGHOUSE

Intergovernmental Relations Division
240 Cottage Street S.E., Salem, Oregon 97310
Leslie Lehmann, Coordinator Phone: 378-3732

LOCAL GOVERNMENT RELATIONS DIV.
MAR 1 1976

PNRS STATE REVIEW

Project #: 7602 5 760 Due Date: MAR 05 1976

To Agency Addressed: If you intend to comment but cannot respond by the return date, please notify us immediately. If no response is received by the due date, it will be assumed that you have no comment and the file will be closed.

PROGRAM REVIEW AND COMMENT

To State Clearinghouse: We have reviewed the subject Notice and have reached the following conclusions on its relationship to our plans and programs:

- ( ) It has no adverse effect.
- ( ) We have no comment.
- ( ) Effects, although measurable, would be acceptable.
- ( ) It has adverse effects.
- (X) We are interested but require more information to evaluate the proposal.
- ( ) Please coordinate the implementation of the proposal with us.
- ( ) Additional comments for project improvement. (Attach if necessary)

- - - - - - - - - - -

REMARKS (Please type or print legibly) 2/26/76

I suggest that a public hearing be held in Burns so that various economic and environmental factors can be discussed

K-20

Agency Econ. Development By J E Curtis

OREGON PROJECT NOTIFICATION AND REVIEW SYSTEM

STATE CLEARINGHOUSE

Intergovernmental Relations Division
240 Cottage Street S.E., Salem, Oregon 97310
Leslie Lehmann, Coordinator Phone: 378-3732

RECEIVED-PTLD
FEB 23 1976
DEPT OF GEOLOGY
& MINERAL INDUS.

PNRS STATE REVIEW

Project #: 7602 5 760 Due Date: MAR 05 1976

To Agency Addressed: If you intend to comment but cannot respond by the return date, please notify us immediately. If no response is received by the due date, it will be assumed that you have no comment and the file will be closed.

PROGRAM REVIEW AND COMMENT

To State Clearinghouse: We have reviewed the subject Notice and have reached the following conclusions on its relationship to our plans and programs:

( ) It has no adverse effect.

( ) We have no comment.

(X) Effects, although measurable, would be acceptable.

( ) It has adverse effects.

( ) We are interested but require more information to evaluate the proposal.

( ) Please coordinate the implementation of the proposal with us.

( ) Additional comments for project improvement. (Attach if necessary)

- - - - - - - - - - -

REMARKS (Please type or print legibly)

We are preparing a report for the proposed project discussing the prospects for oil and gas in that area, the general geology and the impact od development.

K-21

Agency Geology By V.C. Newton Jr Petrol Engr

OREGON PROJECT NOTIFICATION AND REVIEW SYSTEM

STATE CLEARINGHOUSE

Intergovernmental Relations Division
240 Cottage Street S.E., Salem, Oregon 97310
Leslie Lehmann, Coordinator Phone: 378-3732

LOCAL GOVERNMENT RELATIONS DIV.
MAR 5 1976

PNRS STATE REVIEW

Project #: 7602 5 470 and #7602 5 760 Due Date: MAR 05 1976

To Agency Addressed: If you intend to comment but cannot respond by the return date, please notify us immediately. If no response is received by the due date, it will be assumed that you have no comment and the file will be closed.

PROGRAM REVIEW AND COMMENT

To State Clearinghouse: We have reviewed the subject Notice and have reached the following conclusions on its relationship to our plans and programs:

( ) It has no adverse effect.

( ) We have no comment.

( ) Effects, although measurable, would be acceptable.

( ) It has adverse effects.

( ) We are interested but require more information to evaluate the proposal.

(X) Please coordinate the implementation of the proposal with us.

( ) Additional comments for project improvement. (Attach if necessary)

- - - - - - - - - - -

REMARKS (Please type or print legibly)

We are planning to participate by making input concerning potential fish and wildlife impacts of the proposed oil and gas exploration. It is requested that further coordination with our department be through our district biologist Ellis Mason, (573-6582), Hines.

Agency Fish & Wildlife By William E. Pitney 3/4/76
ENVIRONMENTAL MANAGEMENT SECTION

Vern

OREGON PROJECT NOTIFICATION AND REVIEW SYSTEM

STATE CLEARINGHOUSE

Intergovernmental Relations Division
240 Cottage Street S.E., Salem, Oregon 97310
Leslie Lehmann, Coordinator Phone: 378-3732

FEB 18 1976

RECEIVED-PTLD
FEB 13 1976
DEPT OF GEOLOGY
& MINERAL INDUS.

PNRS STATE REVIEW

Project #: 7602 5 470 Due Date: MAR 05 1976

To Agency Addressed: If you intend to comment but cannot respond by the return date, please notify us immediately. If no response is received by the due date, it will be assumed that you have no comment and the file will be closed.

PROGRAM REVIEW AND COMMENT

To State Clearinghouse: We have reviewed the subject Notice and have reached the following conclusions on its relationship to our plans and programs:

( ) It has no adverse effect.

( ) We have no comment.

(X) Effects, although measurable, would be acceptable.

( ) It has adverse effects.

( ) We are interested but require more information to evaluate the proposal.

( ) Please coordinate the implementation of the proposal with us.

( ) Additional comments for project improvement. (Attach if necessary)

- - - - - - - - - - - -

REMARKS (Please type or print legibly)

We are preparing a report covering general geology, oil and gas prospects, and the probable impact of oil and gas exploration and development on the area described.

K-23

Agency Geology By V.C. Newton Jr - Petroleum Engr

Len

OREGON PROJECT NOTIFICATION AND REVIEW SYSTEM

STATE CLEARINGHOUSE

Intergovernmental Relations Division
240 Cottage Street S.E., Salem, Oregon 97310
Leslie Lehmann, Coordinator Phone: 378-3732

FEB [illegible] 1976

PNRS STATE REVIEW

Project #: 7602 5 470 Due Date: MAR 05 1976

To Agency Addressed: If you intend to comment but cannot respond by the return date, please notify us immediately. If no response is received by the due date, it will be assumed that you have no comment and the file will be closed.

PROGRAM REVIEW AND COMMENT

To State Clearinghouse: We have reviewed the subject Notice and have reached the following conclusions on its relationship to our plans and programs:

- ( ) It has no adverse effect.
- ( ) We have no comment.
- (X) Effects, although measurable, would be acceptable.
- ( ) It has adverse effects.
- ( ) We are interested but require more information to evaluate the proposal.
- ( ) Please coordinate the implementation of the proposal with us.
- ( ) Additional comments for project improvement. (Attach if necessary)

- - - - - - - - - - -

REMARKS (Please type or print legibly)

Standard has leases on state owned land in this area.

K-24

Agency Lands By Leonard [illegible]

OREGON PROJECT NOTIFICATION AND REVIEW SYSTEM

STATE CLEARINGHOUSE

DEPARTMENT OF
LAND CONSERVATION
AND DEVELOPMENT
FEB 17 1976
SALEM

Intergovernmental Relations Division
240 Cottage Street S.E., Salem, Oregon 97310
Leslie Lehmann, Coordinator   Phone: 378-3732

MAR 5 1976

PNRS STATE REVIEW

Project #: 7602 5 470   Due Date: MAR 05 1976

To Agency Addressed: If you intend to comment but cannot respond by the return date, please notify us immediately. If no response is received by the due date, it will be assumed that you have no comment and the file will be closed.

PROGRAM REVIEW AND COMMENT

To State Clearinghouse: We have reviewed the subject Notice and have reached the following conclusions on its relationship to our plans and programs:

(x) It has no adverse effect.

( ) We have no comment.

( ) Effects, although measurable, would be acceptable.

( ) It has adverse effects.

( ) We are interested but require more information to evaluate the proposal.

( ) Please coordinate the implementation of the proposal with us.

( ) Additional comments for project improvement. (Attach if necessary)

- - - - - - - - - - -

REMARKS (Please type or print legibly)

Should be coordinated with Harney County Planning Commission

K-25

Agency LCDC 3/4   By Jim R Gustafson

OREGON PROJECT NOTIFICATION AND REVIEW SYSTEM

STATE CLEARINGHOUSE

Intergovernmental Relations Division
240 Cottage Street S.E., Salem, Oregon 97310
Leslie Lehmann, Coordinator Phone: 378-3732

LOCAL GOVERNMENT RELATIONS DIV.
MAR 5 1976

PNRS STATE REVIEW

Project #: 7602 5 470 and #7602 5 760 Due Date: MAR 05 1976

To Agency Addressed: If you intend to comment but cannot respond by the return date, please notify us immediately. If no response is received by the due date, it will be assumed that you have no comment and the file will be closed.

PROGRAM REVIEW AND COMMENT

To State Clearinghouse: We have reviewed the subject Notice and have reached the following conclusions on its relationship to our plans and programs:

( ) It has no adverse effect.

( ) We have no comment.

( ) Effects, although measurable, would be acceptable.

( ) It has adverse effects.

( ) We are interested but require more information to evaluate the proposal.

(X) Please coordinate the implementation of the proposal with us.

( ) Additional comments for project improvement. (Attach if necessary)

- - - - - - - - - - -

REMARKS (Please type or print legibly)

We are planning to participate by making input concerning potential fish and wildlife impacts of the proposed oil and gas exploration. It is requested that further coordination with our department be through our district biologist Ellis Mason, (573-6582), Hines.

K-26

Agency Fish & Wildlife By William E. Pitney 3/4/76
ENVIRONMENTAL MANAGEMENT SECTION

OREGON DIVISION

Izaak Walton League of America, Inc.

DEFENDER OF SOIL, WOODS, WATERS AND WILDLIFE

STATE OFFICERS

Charles S. Collins
President
P.O. Box 1003
Roseburg, Oregon 97470

Rey Bente
Vice President
3970 Bailey Hill Road
Eugene, Oregon 97405

Joan Knudtson
Secretary
P.O. Box 250
Roseburg, Oregon 97470

Ralph E. Bergerson
Treasurer
Timber Route, Box 176
Vernonia, Oregon 97064

James A. Potter
Exec-Secy.
1505 Cornell Avenue
Gladstone, Oregon 97027

REGIONAL VICE PRESIDENTS

Robert W. Phillips (Regn-1)
8880 S.W. Mayo
Portland, Oregon 97223

Eldon May (Regn-2)
1917 Willamina Avenue
Forest Grove, Oregon 97116

John DeMarco, Sr. (Regn-3)
2012 Greiner
Eugene, Oregon 97405

Edwin B. Abbott (Regn-4)
2913 Comice Drive
Medford, Oregon 97501

Virginia V. McLucas (Regn-5)
P.O. Box 324
Maupin, Oregon 97037

Loren Hughes (Regn-6)
1108 Adams
LaGrande, Oregon 97850

John C. Creed (Regn-7)
P.O. Box 803
Burns, Oregon 97720

EXECUTIVE COMMITTEE

State Officers and -

Dr. James Beyliss
220 Eric Street
Medford, Oregon 97501

John DeMarco, Sr.
2012 Greiner
Eugene, Oregon 97405

Jack E. Dugan
Route 2, Box 246
Newberg, Oregon 97132

Ole J. Heldorson
1867 N. Park Avenue
Eugene, Oregon 97402

Wendell P. Haley
1840 N.E. 92nd Avenue
Portland, Oregon 97220

Robert C. Holloway
4911 S.W. Patton Rd.
Portland, Oregon 97221

Dennis Hunt
P.O. Box 1376
Eugene, Oregon 97401

Dean L. Jones
9240 S.W. Alpine Terrace
Portland, Oregon 97225

Larry R. Kaufman
P.O. Box 540
Waldport, Oregon 97394

Iver W. Masterson
Route 1, Box 1377
LaGrande, Oregon 97850

Roderick J. Munro
3300 S.W. Ridgewood Road
Portland, Oregon 97225

Tom Redcliff
134 Dahlia
Klamath Falls, Oregon 97601

Carroll M. Smithson
2045 N.E. 144th Ave.
Portland, Oregon 97230

Oliver Steffen
Rt. 2, Box 287
Silverton, Oregon 97381

NATIONAL DIRECTORS

James K. Belknap
7400 S.W. 84th
Portland, Oregon 97223

Dr. Alfred J. Kreft
1300 Medical Center Bldg
Portland, Oregon 97205

Robert W. Phillips
8880 S.W. Mayo
Portland, Oregon 97223

Adm. AM 2 3
Received MAR 1976 DISTRICT BURNS
Resources Ops
Geo

Box 803, Burns, Ore.
Mar 1, 1976

US BLM
75 So Alvord
Burns, Ore.

Attn Chris Vosler

Dear Chris:

At their Feb. meeting the Harney County Chapter of the Izaak Walton League discussed the Standard Oil application for an oil and gas well in the Willow Creek area, specifically the N½ of the SW¼ of section 3, T23S R29E. The only concern was the possible disturbance of winter deer pasture.

In order to minimise the disturbance it is recommended that the access road be located on the existing road to the nearest point to the well site. In the remote chance that they do develop a paying field considerable damage will be done to winter range, however the petroleum shortage being what it is that's something we'll have to live with

Yours truly J. H. Creed - Pre
H.C. Chap
IWLA

A NON-PROFIT ORGANIZATION WORKING FOR A BETTER OUTDOOR AMERICA

DEPARTMENT OF ENERGY

528 COTTAGE STREET N.E. • SALEM, OREGON • 97310 • Phone 378- 6469

ROBERT W. STRAUB
GOVERNOR

LON TOPAZ
Director

Employee
DM
Adm.
AM 1
AM 2
AM 3
RECEIVED FEB 2 1976 DISTRICT BURNS
Resources
Geo

RELATIONS DIV
FEB 25 1976

February 23, 1976

District Manager
Burns District Office
U.S. Department of the Interior
Bureau of Land Management
74 South Alvord
Burns, Oregon 97720

Ref: #7602 5 470

Dear Sir:

The Department of Energy has received notification of your intent to prepare an environmental analysis of areas within your jurisdiction for oil and gas leasing.

The items to be reviewed, as identified in your notice, are those generally discussed in EAR's and EIS's. At this time, we do not have any comment toward additional items to be considered but request the opportunity to review the draft EAR when available.

Sincerely,

W. R. Vermeere

W. R. Vermeere
Environmental Specialist

WRV:bh

DEPARTMENT OF ENERGY

528 COTTAGE STREET N.E. • SALEM, OREGON • 97310 • Phone 378- 6469

ROBERT W. STRAUB
GOVERNOR

LON TOPAZ
Director

LOCAL GOVERNMENT
RELATIONS DIV
FEB 25 1976

February 23, 1976

Employee
Adm.
Receive FEB 23 1976 DISTRICT
Resources
Geo RP

District Ranger
Snow Mountain District
Ochoco National Forest
U.S. Department of the Interior
Bureau of Land Management
74 South Alvord
Burns, Oregon 97720

Ref: #7602 5 470

Dear Sir:

The Department of Energy has received notification of your intent to prepare an environmental analysis of areas within your jurisdiction for oil and gas leasing.

The items to be reviewed, as identified in your notice, are those generally discussed in EAR's and EIS's. At this time, we do not have any comment toward additional items to be considered but request the opportunity to review the draft EAR when available.

Sincerely,

WR Vermeere

W. R. Vermeere
Environmental Specialist

WRV:bh

803-6.4
JC

FEB [illegible] 1976

OREGON PROJECT NOTIFICATION AND REVIEW SYSTEM

STATE CLEARINGHOUSE

Employee | Act | Adm. | AM 1 | AM 2 | AM 3 | FEB [illegible] 1976 | Opns

Intergovernmental Relations Division
240 Cottage Street S.E., Salem, Oregon 97310
Leslie Lehmann, Coordinator Phone: 378-3732

PNRS STATE REVIEW

Project #: 7602 5 760 Due Date: MAR 05 1976

To Agency Addressed: If you intend to comment but cannot respond by the return date, please notify us immediately. If no response is received by the due date, it will be assumed that you have no comment and the file will be closed.

PROGRAM REVIEW AND COMMENT

To State Clearinghouse: We have reviewed the subject Notice and have reached the following conclusions on its relationship to our plans and programs:

( ) It has no adverse effect.

( ) We have no comment.

( ) Effects, although measurable, would be acceptable.

( ) It has adverse effects.

(X) We are interested but require more information to evaluate the proposal.

( ) Please coordinate the implementation of the proposal with us.

( ) Additional comments for project improvement. (Attach if necessary)

- - - - - - - - - - -

REMARKS (Please type or print legibly) 2/26/76

I suggest that a public hearing be held in Burns so that various economic and environmental factors can be discussed.

K-30

Agency Econ. Development By J E Curtis

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION X
1200 SIXTH AVENUE
SEATTLE, WASHINGTON 98101

REPLY TO ATTN OF: 10FA - M/S 623 February 13, 1976

Mr. E. J. Peterson
Acting State Director
Bureau of Land Management
Department of the Interior
P. O. Box 2965
Portland, Oregon 97208

Dear Mr. Peterson:

In the past month we have received four separate notices indicating that different BLM district offices are considering oil and gas leasing in areas within their jurisdiction. All of these district offices [Salem, Eugene, Prineville, Roseburg] indicate that they are preparing Environmental Analysis Records [EAR's] for proposed lease sales.

This is our first exposure to BLM's mineral leasing activities, other than Outer Continental Shelf leasing, and we therefore lack a working understanding of the process which you go through in considering a mineral lease. We would appreciate it if you could provide us with the following information so that we can respond adequately to the information requests which the district offices have made with respect to the EAR's which are under preparation.

1. A description of your onshore mineral leasing process which indicates:
    a. the major procedural steps
    b. the place which the EAR occupies in your EIS preparation process
    c. an estimate of the normal time spans involved in each of the major procedural steps identified in "a', above
2. We would also appreciate knowing whether other district BLM offices in Oregon are initiating EAR's on oil and gas leasing and whether your office intends to prepare an Environmental Impact Statement on the total program within the State of Oregon in order to identify the cumulative impacts of this apparently expanded effort.

In the interim, we will be determining whether EPA has, in the past, prepared any formal guidance with respect to the kinds of information which should be presented in an EIS on onshore oil and gas leasing.

Sincerely,

Walter D. Jaspers

Walter D. Jaspers
Director
Office of Federal Affairs

cc: District Manager, BLM
Salem, Oregon

District Manager, BLM
Roseburg, Oregon

District Manager, BLM
Eugene, Oregon

District Manager, BLM
Prineville, Oregon

United States Department of the Interior

BUREAU OF RECLAMATION
PACIFIC NORTHWEST REGION
FEDERAL BUILDING & U.S. COURTHOUSE
BOX 043–550 WEST FORT STREET
BOISE, IDAHO 83724

IN REPLY REFER TO: 160
120.1

Employee
DM
Adm.

FEB 18 1976

Memorandum

To: District Manager, Burns District Office, Bureau of Land Management, Burns, Oregon

From: Regional Environmental Officer, Boise, Idaho

Subject: Preparation of Environmental Analysis Report on Oil and Gas Leasing - Snow Mountain District, Ochoco National Forest, Oregon

We have reviewed your invitation to participate in the subject analysis and have no specific comments or information to provide at this time. We would, however, like to receive a copy of the completed analysis. Thank you for notifying us of your plans in that area.

For the Regional Environmental Officer

Douglas J James

Douglas J. James, Acting for
John R. Woodworth, Regional
Environmental Officer

AMERICAN REVOLUTION BICENTENNIAL 1776-1976

Employee | Act | Employee | Act. | Info
DM
Adm.
AM 1
AM 2
AM 3
AM 4
Received FEB [illegible] 1976 DISTRICT BURNS
Resources

February 19, 1976

PORTLAND
STATE
UNIVERSITY
p. o. box 751
portland, oregon
97207
503/229-3914

college of
social science
department of
anthropology

Mr. L. Christian Vosler, District Manager
U.S. Department of Interior
Bureau of Land Management
Burns District
74 South Alvord
Burns, Oregon 97720

Dear Mr. Vosler,

I received your letter of February 13 regarding the 2 areas of interest from an archeological point of view. While I have not done much systematic work in that area, I do know directly and indirectly of several sites. The most important area is that northwest of Burns which contains an exceptionally large obsidian quarry on and adjacent to Burns Butte and the military reservation. This is quite extensive but most of it is contained in Section 20, Township 23S, Range 30E. There are, undoubtedly, a number of small sites and chipping stations adjacent to it. Obsidian quarries of this size are extremely rare and this one has not been thoroughly investigated. I also understand there are several sites on or near Sage Hen Hill but I have not investigated them. I do not know specifically of the Folly Farm area but there are several known sites [illegible] adjacent to the highway to Burns Junction and I would be very surprised if there were not a large number of sites in the Folly Farm area.

I hope this will be of help to you.

Sincerely yours,

Tom Newman

Thomas M. Newman
Professor of Anthropology

TMN:mkb

UNIVERSITY OF OREGON

an equal opportunity/
affirmative action employer

Department of
Anthropology
COLLEGE OF LIBERAL ARTS

EUGENE, OREGON 97403
telephone (code 503) 686-5102

February 18, 1976

Employee
DM
Adm.
Receive FEB 1 1976 DISTRICT
Resources
Arch. CMA

Mr. L. Christian Vosler
District Manager
Burns District Office
Bureau of Land Management
Burns, Oregon 97720

Dear Mr. Vosler:

This is in response to your letter of February 13 asking for any information I might have pertaining to archaeological or historic sites in the Burns and Folly Farm area.

This morning I went to the Oregon State Museum of Anthropology, a division of the Natural History Museum here on campus, to check the files. In conversing with David Cole, curator of the OSMA, I learned that he had received a similar request from you. Since the Department of Anthropology maintains no records separate from those of OSMA there is nothing I can add to the information Mr. Cole can supply. Mr. Cole indicated that he would respond to your request, so I will carry the matter no further myself.

I can draw your attention to the report I recently sent you by John Fagan in the University of Oregon Anthropological Papers No. 5 wherein he reports sites within the general region you refer to. You may find his interpretations of some interest.

Sincerely,

C. Melvin Aikens

C. Melvin Aikens
Associate Professor

CMA:ta
cc: David Cole

Department of Anthropology
Oregon State University
Corvallis, Oregon 97331 (503) 754-1515

Employee
DM
Adm.
Receive FEB 1976
Resources

February 17, 1976

L. Christian Vosler
District Manager
U.S. Department of Interior
Bureau of Land Management
Burns District Office
74 South Alvord
Burns, Oregon 97720

Dear Mr. Vosler;

The Department's archaeology archives contain no information on the presence of historic or prehistoric cultural resources within the areas described in you letter.

Please note that the lack of information does not imply that such resources are absent, but that Department archaeologists have not been active in the region. I suspect there exists a considerable number of archaeological sites.

If I can be of further assistance, please contact me.

Sincerely yours,
W. A. Davis
Wilbur A. Davis
Professor

ls

K-36

1859

ROBERT W. STRAUB
~~TOM McCALL~~
GOVERNOR

F. B. KLABOE
Administrator and
State Highway Engineer

OREGON STATE
HIGHWAY DIVISION

Region 5 Office

P. O. Box 850 ... La Grande, Oregon 97850 ... Phone 963-3177

February 17, 1976

Employee
DM
Adm.
AM 1
AM 2
AM 3
Receive: FEB 1976 DISTRICT BURNS
Resources

Burns District Office
Bureau of Land Management
74 South Alvord
Burns, Oregon 97720

Gentlemen:

The Oregon Highway Division has considered the proposal of Standard Oil of California to drill an exploratory well in the N½SW¼ Section 3, T. 23 S., R. 29 E., west of Burns. No Highway Division facilities are affected by this proposal and we have no objection to the activity.

Thank you for the opportunity to comment.

Sincerely,

Warren E. Schwartz

W. E. Schwartz
Regional Engineer

WES:sh

cc R. L. Schroeder w/attach.
C. K. Ansell "

K-37

PROPERTY OF
Bureau of Land Management
DSC LIBRARY

PROPERTY OF
Bureau of Land Management
DSC LIBRARY

Form 1279-3
(June 1984)

BORROWER'S CAR

TD 195 .P4 B87 1976
Burns-Ochoco non-com
oil & gas area

DATE LOANED

BORROWER

USDI - BLM